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# Supreme Court of the United States

OCTOBER TERM, 1949.

No. 206

RADCLIFFE MORRIS URQUHART and GEORGE G. URQUHART,
*Petitioners,*

v.

PYRENE MANUFACTURING COMPANY, *Respondent.*

## PETITION FOR WRIT OF CERTIORARI TO THE CIRCUIT COURT OF APPEALS FOR THE THIRD CIRCUIT, AND BRIEF IN SUPPORT THEREOF.

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## PETITION FOR WRIT OF CERTIORARI TO THE CIRCUIT COURT OF APPEALS FOR THE THIRD CIRCUIT.

TO THE HONORABLE, THE CHIEF JUSTICE and ASSOCIATE JUSTICES OF THE SUPREME COURT OF THE UNITED STATES:

Your petitioners, Radcliffe Morris Urquhart and George G. Urquhart, respectfully pray for a writ of certiorari to the Circuit Court of Appeals for The Third Circuit, to review a judgment of that court entered May 31, 1949. A certified transcript of the record in the case, including the proceedings in said Circuit Court of Appeals, is furnished herewith in accordance with Rule 38 (1) of the Rules of this Court.

## A.

## SUMMARY STATEMENT OF THE MATTER INVOLVED.

### Glossary of Technical Terms.

For the convenience of the Court in considering this petition and the supporting brief the following explanation of certain of the technical terms used throughout is given below:

Fire Foam—A foam consisting of a homogeneous mass of bubbles formed by a skin of water surrounding a gaseous medium, usually carbon dioxide or atmospheric air.

Chemical Foam—A fire foam produced by chemical reaction of basic and acid powders introduced into a flowing stream of stabilizer fortified water to react and produce a foam forming gas (usually carbon dioxide) and agitate and mix the gas and stabilizer fortified water into a foam. Almost universally used prior to the commercialization of the process and apparatus of the patents here in suit.

Stabilizer—Sometimes referred to as foam forming agent or material. Consists of a water miscible substance, such as saponin, licorice, soybean extract, or like substances capable of increasing the surface tension of water and conditioning it to resist mechanical forces acting to break down the bubble formation of the foam.

Mechanical Foam—A fire foam produced by mechanically mixing a gas (in commercial practice, atmospheric air) with stabilizer fortified water in a manner to beat the gas and stabilizer fortified water into a foam.

Jet Pump—A device employing as a motivating agent a stream or streams of fluid (usually water) flowing from a nozzle at a substantial velocity so as to effect an aspiration of liquids, powders, gas, or air into contact with the fluid stream or streams so as to be entrained or carried along with the fluid stream. In use for aspirating gas or air, these devices were designed to move or pump the air or gas from one place to another where the entrained material was freed, or to absorb soluble constituents to purify or wash the gas or air.

**The Proceedings Below.**

Respondent brought this declaratory judgment suit (R. 4a to 10a) against petitioners, individuals and citizens of the Commonwealth of Pennsylvania, in the District Court of the United States for the Eastern District of Pennsylvania on May 5, 1943. The suit sought a decree that petitioners' United States Letters Patent 2,106,043 directed to a Method and Apparatus for Foam Generating and Distributing and 2,198,585 directed to a Method for Generating and Distributing Fire Exhinguishing Foam were invalid and had not been infringed by respondent (R. 9a, 10a). Petitioners, in due course and after disposal of a preliminary motion to dismiss, not here pertinent, on January 12, 1944, filed their answer denying respondent's assertions of non-infringement and invalidity and asserting a Counterclaim for infringement (R. 15a to 17a) and a second Counterclaim, not pertinent here, which was dismissed by the District Court (R. 408a) and was not appealed.

Respondent's reply, after responding to the allegations of the counterclaim (R. 18a to 20a), asserted a further and separate defense that petitioners had and were using their patents 2,106,043 and 2,198,585 to monopolize the sale of unpatented equipment and supplies and to obtain for themselves profit from the sale of unpatented equipment and supplies sold for use in the process. In addition they as-

serted petitioners had granted rights to certain parties upon terms which restrain the sale of unpatented equipment and supplies for use in the processes alleged to be covered by said patents and by which terms defendants have obtained and were obtaining profit from the sale of unpatented apparatus and supplies for use in the processes alleged to be covered by said patents, and that by reason thereof defendants were barred from enforcing their patents (R. 20a, 21a).

Petitioners, proceeding first pursuant to agreement, introduced testimony of wholly disinterested witnesses, including one Harold J. Burke formerly Deputy Chief of the New York City Fire Department and active head of the Fire Damage Control Section of the Bureau of Ships, United States Navy (R. 119a, 120a), to support their position. This testimony showed the history of fire foam and the objections and problems attending the commercial chemical and mechanical foam processes and apparatus used and commercially offered for use prior to the date of their invention. It also showed the difficulties and problems encountered by petitioners and others in striving to overcome the objections and problems in the prior commercial fire foam processes and apparatus and petitioners' final solution, using the old commercial chemical foam stabilizer, overcoming the difficulties and problems and providing highly practical and efficient mechanical fire foam processes and apparatus, particularly for shipboard and portable usage in combatting gasoline and other volatile fuel fires. Motion pictures depicting the foam produced by petitioners' method and apparatus and by solid stream jet pumps of the prior art were exhibited to prove the solution. The testimony also showed the tremendous, even remarkable, commercial use and success of the process and method disclosed in petitioners patents particularly by the United States Navy during World War II in fighting shipboard gasoline and oil fires, and gasoline and oil fires resulting from crashing airplanes and shells ignit-

ing gasoline and oil supplies at advance bases, beachheads, and the like. Finally it showed that all commercial usage of mechanical foam since the date of petitioners' original application for the patents in suit has employed the stream dispersing principle of the process of the Urquhart et al patents 2,106,043 and 2,198,585 here in suit and without exception the commercial apparauts used since the date of their invention has embodied liquid dispersing nozzles embodying the spiral or baffle disclosed by reference numeral 13 of the Urquhart et al patent drawings or a fully equivalent stream dispersing device.

Petitioners through their own unrebutted testimony, given in depositions taken by respondent, established that petitioners were not engaged in the business of manufacturing, selling, or marketing equipment or supplies for practicing their inventions and that they had no financial interest in the sale of such equipment and supplies other than a patent royalty interest based on a percentage of the cost, to a user, of equipment and supplies for practicing the method or process covered by the said Urquhart patents (R. 727a to 753a). It further established that it was petitioners' intention to license any person or concern who desired to practice their patented process (R. 734a, 736a, 748a) and that such licenses were available either through suppliers of equipment and supplies, who entered into agreements with petitioners to pay the required royalty directly to the Urquharts in behalf of their customers or directly from petitioners so as the user might make, purchase, or have made their equipment and supplies from any source they chose (R. 734a, 748a). To cover the additional expense on the part of petitioners in granting, checking on, and handling such direct licenses to users and to assure petitioners of the same net royalty from all sources, petitioners intended to exact from such a direct user a slightly higher royalty than petitioners received from suppliers for like equipment or like quantities of supplies (R. 737a, 748a). This testimony also showed that peti-

tioners, to assure knowledge by the user customers of supplies having agreements with petitioners that licenses could be obtained without purchasing from said suppliers, required labels to be placed on the equipment and supplies giving notice to this effect (R. 720a, 722a). This testimony also showed that no direct licenses had been applied for and that, therefore, none had been granted, up to the time of trial of this cause (R. 736a, 737a).

Respondents, through a professional patent expert having no previous knowledge as to fire foam (R. 299a, 300a), and engineers of the Schuette and Koerting Company, specialists in the field of jet pumps, sought to establish noninfringement and that (1) the inventions defined by the claims of Urquhart et al patents 2,106,043 and 2,198,585 in suit were anticipated by the Wagener patents, British No. 272,993 of 1927, United States No. 1,821,914 of 1931, German No. 521,973 of 1931, the disclosures of which are for all practical purposes substantially the same (R. 397a); and (2) Burmeister British patent 251,950 of 1927, and certain other patents not deemed worthy of comment by either court below, or did not constitute invention over said patents or over the Schuette and Koerting jet pumps mentioned above. These proofs, analyzed in detail in the brief accompanying this petition, failed to convince the courts below that respondent did not infringe, confirmed the fact that the improvements claimed in the Urquhart et al patents 2,106,043 and 2,198,585 were adopted commercially by everyone in the manufacture of mechanical foam subsequent to the date of the Urquharts' invention, and the fact that respondent itself in its commercial structures did not use any mechanical foam equipment or method other than one employing the dispersion principle and a spiral, baffle or equivalent mechanical dispersion element. Through motion pictures of burning fuel, which Captain Burke the best qualified and wholly disinterested fire foam expert anywhere available said were valueless to determine the quality of the foam (R. 365a, 369a) since "the fuel could have

been extinguished with broken water", (fog or dispersed water) "without any foam at all." (R. 365a), and its admittedly inexperienced professional patent expert respondent sought to prove that fire foam just as satisfactory as that made utilizing the dispersion principle of the Urquharts' patents could be made with the conventional solid stream type jet pumps, even though respondent admittedly would not consider using the latter jet pumps commercially (R. 97a, 98a). Respondents expert admitted (R. 358a) that the fires of the motion pictures used gasoline only as an igniter and, therefore, were not gasoline fires and Captain Burke testified that such a demonstration or test would not be acceptable under Navy Specifications (R. 367a).

The District Court entered its opinion September 10, 1946, holding there was a single question on the issue of validity, namely, whether petitioners' patents in suit constitute a patentable advance of the Wagener patents, British 272993, United States 1821914, and German 521973, all of which embody substantially the same idea (R. 397a). It also held that, although petitioners had put only half of their licensing system into effect by entering into agreements with manufacturers empowering the manufacturers to grant licenses to their customers (R. 406a), the stated intent of petitioners not to grant direct user licenses upon the same royalties exacted from such manufacturers constituted a misuse of patents (R. 406a) in spite of fact that no direct user licenses had been applied for or granted (R. 407a).

In deciding the validity question relating to the method claims against petitioners the District Court found the facts as follows:

> **1. That the Wagener patents do not, either expressly or impliedly, call for special means to give the stream any particular kind of turbulence or subdivision of any higher degree of either than it would acquire by**

**being discharged from a smooth-bore nozzle (R. 398a, 399a).**

**2. That petitioners' patents suggest placing a spiral or other suitable baffle in the motivating nozzle to give turbulence and mechanical subdivision to the stream (R. 400a).**

**3. That a smooth-bore nozzle, carefully designed to that end, can be made to deliver a stream, practically solid except for light atmospheric, atmospheric feathering of its surface and such a stream will not make foam (R. 401a).**

**4. That a smooth-bore nozzle could be shaped in such a way that the stream will be considerably dispersed, sufficiently dispersed to make a useful fire foam (R. 401a).**

This holding contravenes the testimony of Captain Burke (R. 130a-132a), who dictated the United States Navy's fire foam and fire extinguishing practices during the late war (R. 120a), the testimony of petitioners' witnesses (R. 38a, 187a, 188a, 189a, 372a) and respondents' jet pump experts that such nozzles in jet pump practice were designed to avoid dispersion of the stream (R. 97a, 98a, 581a, 600a, 698a, 703a, 704a) and did not impart turbulence or dispersion to the stream, and the District Court's own finding that "These injectors, in commercial practice, were specifically engineered to prevent dispersion of the stream." (R. 399a). It also was made in spite of respondent's own concession that it would not consider commercial use of a smooth-bore nozzle, the fact that respondents employed, in all of its commercial practice, devices designed to get dispersion (R. 97a), and the Court's finding that petitioner's teaching appears "* * * to have been enough of an improvement to be

adopted by Pyrene in its commercial equipment * * *." (R. 401a).

**5. That respondent's test proved a smooth-bore nozzle sufficiently dispersed a stream to produce fire foam good enough to put out a gasoline fire in a very short time (R. 401a).**

This, in spite of respondent's concession that the fires of their tests, shown in the motion pictures (Exhibit, PX*-26), were not gasoline fires (R. 358a-360a), and in spite of Captain Burke's testimony that respondent's tests and pictures were useless in determining the quality of foam (R. 294a, 295a, 365a) and that the fires there shown could be more quickly extinguished by broken water or fog-like spray (R. 365a).

**6. That the history of commercial success proven by the Urquharts, including adoption by respondent of the Urquhart teachings even though respondent had for years controlled the Wagener patents, lacked probative force because "The commercial adoption of mechanical foam was waiting, not so much upon the advent of a practicable method and apparatus, as upon two other developments—first, the production of a cheap stabilizer, and, second, persuading the public that the presence of carbon dioxide or other noninflammable gas was not necessary in order to put out fires by means of foam" (R. 403a).**

This ruling was made in spite of the clear showing that saponin, the very stabilizer used commercially and extensively in chemical foam and there found sufficiently inexpensive prior to commercialization of petitioners' teaching (R. 37a, 95a, 132a, 281a, 393a), was suitable and the fact that use of air in commercial fire mechanical foam made with that same inexpensive saponin had, as early as 1929, been proved acceptable (R. 133a, 392a, 501a, 505a).

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*PX—Plaintiff's Exhibit.

**7. That there is no serious question that the method claims are infringed (R. 397a).**

The District Court then went on to find that the apparatus claims were both invalid and not infringed (R. 403a). In this connection, the following findings were made:

**1. That the four apparatus claims in substance required an arrangement in series of a mechanical device for premixing the water and stabilizer and a "water jet air pump" accomplishing the object described in the method claims (R. 403a).**

**2. That there was, only very remotely, anything which can be described as co-action between the two elements of the purported combination (R. 403a) and that, therefore, the apparatus claims are no more than an aggregation (R. 404a).**

This holding was made in spite of the uncontradicted showing that the tremendous commercial success of the claimed method was achieved solely with the claimed serially arranged devices of the apparatus claims (R. 126a); that, as a practical matter, the method to be successfully used to any great extent commercially necessitated apparatus for efficiently aspirating a concentrated liquid stabilizer solution from a can or other storage source into a stream of water and then intimately mixing with a dispersed stream of water and said stabilizer the air needed to produce foam; and the fact that the particular claimed apparatus was the only apparatus usable commercially to afford full advantage in the saving of storage facilities needed to adapt fire foam for effective fire protection aboard ship or for portable usage on beachheads and on crash trucks (R. 122a-124a).

**3. That, if not an aggregation, the apparatus claims lack patentable novelty over Burmeister English patent of 1927 (R. 404a), number 251950.**

This holding ignores the actual cooperation between the serially arranged devices, the unsuitability of the serially arranged devices of Burmeister to accomplish the production of mechanical foam (R. 245a, 251a), and is based on the further, and we submit, erroneous holding that because the air incorporating device of the Urquhart patent is not in itself a patentable improvement (R. 404a).

**4. That "The series arrangement of the two motive devices used by the apparatus claims for advancing the stream and incorporating foam forming elements into it places the Pyrene devices beyond the line of infringement" (R. 404a).**

This holding, we submit, attaches far more significance than is warranted to the serially functioning but telescopic positioning of the two mechanical elements of the commercial Pyrenne apparatus.

The District Court also found in connection with the misuse defense that:

**1. That in view of the invalidity ruling a ruling on the misuse defense was not strictly necessary but because of the almost certain appeal process would be disposed of (R. 404a).**

**2. That the Urquharts do not manufacture or sell any equipment or material (R. 405a).**

**3. That the Urquharts are willing to grant licenses through persons desiring to manufacture and sell the equipment and material and to persons merely desiring to use the patented process (R. 405a).**

**4. That under the Urquharts plan the manufacturers pay royalties based on both the price which their cus-**

**tomers pay for the equipment and the price they pay for the stabilizer and this is not objectionable (R. 405a).**

**5. That persons who buy from such manufacturers pay what amounts to a royalty, included in the price of the stabilizer (R. 405a).**

**6. That persons who buy equipment from such manufacturers, as a condition of their licenses, must, to use the process, but stabilizer from such a manufacturer and no other source (R. 405a).**

This finding is contrary to all the testimony and to the testimony and to the notices on the labels placed on the notices on on the labels placed on the equipment (R. 715a-722a, 725a, Exhibit, P-21 to P-23, P-25).

**7. A would-be user who expects to buy stabilizer in the general market and applies direct to the Urquharts for a license to use the process will be charged a royalty which, other things being equal, will make it more expensive for him than for those who have obtained licenses by purchasing from such manufacturers (R. 406a).**

This holding is contrary to the expressed intent of petitioners (R. 739a, 740a, 748a), is without support in the record which does not show, we submit, what royalty would be paid either by a manufacturer's customer or a direct user licensee, and fails to recognize the actual factors involved in the two types of licensing which make it impossible for other things to be equal and, therefore, warrants, if not compels, petitioners acting under recent authorities of this Court to make a royalty differential.

On the basis of these findings and views the District Court on October 1, 1946, entered its judgment declaring, among other things not pertinent here, that:

**1. Petitioners' patents invalid and void as to each and all process claims asserted by defendants to be in-**

**fringed by methods employing plaintiff's apparatus or stabilizers and invalid and void as to each and all apparatus claims asserted by defendants to be infringed by plaintiff's apparatus (R. 407a, 408a).**

**2. That said process claims are each invalid and void for lack of invention (R. 408a).**

**3. That said apparatus claims are each invalid and void for lack of invention and also as amounting to no more than aggregation (R. 408a).**

**4. That said apparatus claims, if valid, are not infringed by plaintiff's apparatus, except no adjudication is necessary or made as to the high pressure device plaintiff made for the Army Air Corps (R. 408a).**

**5. That defendants' counterclaim for infringement be dismissed (R. 408a).**

**6. That defendants' have used a licensing system which constitutes a misuse of patents 2106043 and 2198585 and which bars relief under said counterclaim and provides an additional ground for dismissing it (R. 408a).**

Petitioners duly filed their notice of appeal and in due course perfected their appeal and after full briefing of the case by both parties and an oral hearing the Circuit Court of Appeals for the Third Circuit affirmed the judgment of the District Court. This affirmance was by written opinion filed May 18, 1948, and reported at 168 F (2d) 310, 77 USPQ 492.

This opinion clearly sustained the District Court findings favorable to the Urquhart patents in suit and to the Urquhart licensing plan and, we submit, recognized the above mentioned erroneous District Court findings. The Court of Appeals, however, in attempting to rectify the errors of the District Court and justify affirmance of the holdings of invalidity, non-infringement, misuse, and dismissal of the

counterclaim made fact findings of a far more erroneous nature. In this connection, the Circuit Court of Appeals made the following findings:

**1. The earlier foams were "chemical"; that is to say, they were formed by a non-combustible gas such as carbon dioxide being introduced into an aqueous solution containing a stabilizer like, saponin (Dec. 5/18/48, p. 2).**

While saponin was used as the stabilizer in chemical foam, the uncontradicted evidence shows chemical foam was produced by introduction into a water stream basic and acid reagents mixed with saponin (Palmer United States Patent 1,591,401 (R. 670a) or introducing into a portion of the water stream the stabilizer and diverting the remainder of the stream into a mixing chamber below a hopper containing dry powder basic and acid reagents to form a reacting solution which is subsequently introduced into the aqueous stabilizer solution (Burmeister British Patent 251950 (R. 662a), and relying upon the chemical reaction of the reagents to generate carbon dioxide gas and by the chemical agitation whipping the mixture into foam. In both of these devices, the use of solid water streams is taught since such streams and only such streams are usable to properly and efficiently aspirate and mix powders or liquids (R. 244a, 245a, 571a).

**2. Later. the non-combustible gas was omitted and foam, known as "mechanical" foam was generated by water containing a stabilizer violently agitated with air (Dec. 5/18/48, p. 2).**

While such a mechanical foam was generated later, the evidence shows it was first successfully made (R. 133a, 392a) by mechanical beater pumps used to beat a saponin solution and air together (Schroder et al United States patent 1,927,376, (R. 501a) and Hansen-Ellehammer United States patent 1,970,082 (R. 505a) and thereafter successfully made by peti-

tioners utilizing the dispersed water stream principle and apparatus disclosed and claimed in Urquhart patents 2,106,043 and 2,198,585 in suit (124a, 132a).

**3. Specifically patent 2,106,043 discloses means and apparatus for creating either chemical or mechanical foam by injecting water and stabilizer with a non-inflammable gas such as carbon dioxide or with air so that the "mix" will be violently agitated, and for ejecting the stream turbulently from a nozzle at the fire (Dec. 5/18/48, p. 2).**

The evidence clearly and without contradiction shows that the means and apparatus of patent 2,106,-043 will not produce chemical foam and that the turbulence taught by this patent to be necessary is that in the foam forming chamber 11 (R. 415a, col. 1, lines 4 through 11, col. 2, lines 38 to 41, lines 49 and 50, lines 67 and 68, R. 416a, col. 1, lines 43 to 45, col. 2, lines 5 to 9, lines 13 to 18, lines 22 to 24, lines 31 to 35 (note the word "foam" line 32 should be "form" as shown by certificate of correction issued by the Patent Office September 27, 1938, and attached to all official printed copies of the patent), lines 41 to 45, and the testimony of petitioners' witnesses.

**4. The Urquharts have improved on Wagener and Burmeister to a considerable extent and the Urquharts' apparatus and method have obtained substantial commercial success (Dec. 5/18/48, p. 3).**

This finding, we submit, is inescapable on the evidence before the courts.

**5. We perceive in Burmeister British patent No. 251,950, two ejectors arranged in series to agitate and move the stream of water (Dec. 5/18/48, p. 3).**

This finding, since the Burmeister ejectors are clearly smooth-bore solid stream ejectors, is clearly erroneous and contrary to all the evidence in the rec-

ord (R. 38a, 97a, 130a to 132a, 245a, 297a, 298a, 621a, 622a).

**6. What the Urquharts have accomplished demonstrates mere mechanical ingenuity as distinguished from invention (Dec. 5/18/48, p. 3).**

This finding was made in the face of undisputed proofs that the prior chemical and mechanical fire foam methods and apparatus were unsatisfactory for shipboard and portable use (R. 34a, 35a, 43a, 122a, 133a), that there was a real need for a satisfactory portable and shipboard fire foam method and apparatus because of transportation and shipboard storage space limitations (R. 35a, 133a), that no one prior to the improvements disclosed by the Urquharts had suggested a commercially practical mechancial fire foam method and apparatus (R. 133a), that commercial offering of the improvements of the Urquharts resulted in rapid growth and use of the improvements in building up mechanical fire foam as a real competitor of the universally used chemical fire foam methods and apparatus, and that without these very improvements ship, material, and personnel losses from fires aboard ship and at advance bases as a result of shell ignited fuel fires might well have materially delayed if not lost the recent war for this country and its allies (R. 125a-130a).

**7. The fact that Burmeister's second ejector picks up chemicals instead of air is immaterial (Dec. 5/18/48, p. 3).**

This finding is, we submit, based on a misunderstanding of jet pump operation and is contrary to all evidence in the record, which evidence unquestionably establishes that the solid stream jet pump is efficient in picking up and mixing liquids or powders (R. 244a, 245a, 571a), is extremely inefficient in picking up and mixing air and had never been so used commercially (R. 245a, 709a, 710a), that the Burmeister apparatus

will not incorporate air to make mechanical foam (R. 245a, 251a), and, conversely, the Urquharts' apparatus will not make chemical foam. This finding, furthermore, is inconsistent with the Appeals Court's finding referred to under numeral 4 above.

**8. The disclosures and claims of both Urquhart patents are void because anticipated by the prior art Wagener patents, British 272,993, United States 1,821,914, and German 521,973 and Burmeister British patent 251,950 (Dec. 5/18/48, p. 3).**

This conclusion is without factual basis and, we submit, is based on the Court of Appeals' above noted misunderstanding of the processes of producing foam and jet pump operation and its erroneous holding referred to under numeral 6 above.

**9. The apparatus claims of 2,106,043 are void as functional. Leeds & Catlin Company v. Victor Talking Machine Company, 213 U. S. 301; In re Garratt, 63 F. (2d) 113 (Dec. 5/18/48, p. 3).**

This conclusion of the Court of Appeals is not supported by the cited authorities, for the Leeds and Catlin decision failed to hold the claims there in question invalid as functional (See page 311 of the reported decision), and the claim rejected in the Garratt decision was of an entirely different form and did not involve the long recognized and frequently approved terminology, means followed by a statement of function, as do the apparatus claims here in question.

**10. The evidence shows the Urquharts have used the patents in suit and intend to employ them to afford their manufacturing licensees an advantage in the purchase of unpatented stabilizer over such competitors as Pyrene (Dec. 5/18/48, p. 3).**

This finding is contrary to fact. The evidence shows that Pyrene and the so-called manufacturing licensees sell rather than purchase unpatented stabilizer (R.

215a, Exh. P-20), that the Urquharts are ready and willing to enter into agreements with any manufacturers on the same terms as those contained in their present manufacturer agreements (R. 391a, 748a), that Pyrene was offered such an agreement (R. 391a, 749a), that Pyrene turned down such an agreement because of the competition the Urquharts' licensing system assured (R. 751a, 752a), and that the Urquharts, in addition to offering manufacturers in Pyrene's position such agreements, were ready and willing to directly license users so they could buy their apparatus and stabilizers from any source they saw fit, including Pyrene, irrespective of whether such manufacturers or suppliers held agreements to sell licenses under the Urquhart patents (R. 748a).

**11. The Urquharts do not themselves make or sell the unpatented stabilizer.**

**12. The Urquharts merely exploit the monopoly of their patents by requiring manufacturers who have entered into agreements with them not to sell unpatented supplies for use under the Urquharts process unless 15% of the net selling price is paid to them for licensing the purchaser to use the unpatented supplies in the claimed process (Dec. 5/18/48, p. 4).**

**13. The general course is prohibited by the decision in Barber Asphalt Corporation v. La Fera Grecco Contracting Company, (C. C. A. 3) 106 F. (2d) 211.**

This conclusion is, we submit, erroneous.

**14. The offense against public policy is clear and the principle of Morton Salt Company v. G. S. Suppiger Company, 314 U. S. 488 and B. B. Chemical Company v. Ellis, Id. at p. 495, is applicable.**

This conclusion is, we submit, also erroneous.

Conceiving the complete injustice and error in this opinion, petitioners filed a petition for rehearing to the Circuit

Court of Appeals which petition was granted July 2, 1948, and reargued October 8, 1948. On May 31, 1949, the Circuit Court of Appeals entered its decision on rehearing.

While still concluding the Urquharts' patents were (1) anticipated by Wagener's patents (Dec. 5/31/49, p. 5), (2) that the Urquharts' apparatus claims did not involve invention over Burmeister British patent 251,950 (Dec. 5/31/49, p. 7), and that the apparatus claims are void as functional (Dec. 5/31/49, p. 7), the court refused to pass on the defense of abuse of their patent monopolies (Dec. 5/31/49, p. 8) yet affirmed the judgment of the District Court (Dec. 5/31/49, p. 8), including the holding:

> **"6. That defendants have used a licensing system which constitutes a misuse of said patents 2,106,043 and 2,198,585 and which bars relief under said counterclaim and provides an additional ground for dismissing it."**

While curing many of their errors in fact finding and, we submit, strengthening the factual basis for a ruling in favor of validity and infringement of the Urquharts' patents, this new opinion of the Court of Appeals contained the following erroneous findings and conclusions:

> **1. The Urquharts cannot contend that the idea of mechanical foam originated with them for it is clear that three earlier patents to Wagener, British No. 272,993 of 1927, United States No. 1,821,914, and German 521,973, both of 1931 (Dec. 5/31/49, p. 3).**
>
> This finding ignores the fact that there is no credible evidence that satisfactory mechanical fire foam was ever made following the Wagener patent teachings, that Mr. Durfee, director of fire protection engineering of Pyrene Manufacturing Company, testified that Pyrene undertook production of air-foam units in 1935 (R. 94a), some three years after the Urquharts' claimed inventions (R. 46a, 580a) and some years after learning of the Urquharts' inventions through

interference proceedings, and further testified that prior to that time there was no production of that type of foam (R. 94a). This finding also ignores the fact that this very production of fire foam involved the use of the claimed Urquhart method and apparatus (R. 97a), that mechanical fire foam had been previously made and offered commercially utilizing the mechanical beater pump method and apparatus of the Schroder et al United States patent 1,927,376 and Hansen-Ellehammer patent 1,970,082 (R. 133a, 392a, 501a, 505a), that Pyrene prior to the time of first making mechanical or air-foam had acquired and paid for a license under Frederick's United States Letters Patent 2,003,184 (R. 459a) disclosing the Urquharts' inventions and involved in Interference No. 70,803 decided in favor of the Urquharts, and that all of the evidence shows that practical and useful mechanical fire foam can be made only by utilization of the Urquharts claimed method and apparatus (R. 97a, 124a, 212a).

**2. But the specification also states that ". . . action (taking place in the nozzle because of the spiral or baffle) is not absolutely necessary for the present invention but is advantageous. This concession is a necessary one for the record demonstrates clearly that good mechanical foam can be made by a proper adjustment of the nozzle in the chamber, both as to size and to position, to the conical exit passage or tail piece of the chamber whence the foam by means of hose and nozzle is thrown on the fire. It follows, therefore, as we read the Urquharts' specifications, that it is not an essential element of their disclosures that the nozzle of the mixing chamber be spiraled or contain a baffle to aid in the subdivision of the liquid."**

This finding, which is essentially correct, emphasizes the difference in teaching between the Urquharts' pat-

ents and the Wagener patents, namely, that the Urquharts teaching that the liquid stream as it leaves the nozzle 12, that is when in chamber 11 in contact with the air must be subdivided, dispersed, and in a condition of turbulence, irrespective of the internal structure of the nozzle, whereas Wagener teaches no more than that the issuing stream at this point be like that obtained in the conventional jet pump, namely, free of turbulence and capable of entering the tail piece with the minimum of interference to its forward movement (R. 697a, 698a).

That there is no teaching of such turbulence in Wagener is clear from the patent itself and the testimony of the witnesses in this case, including respondents own jet pump witnesses, Ketterer and Lindeman, whose testimony shows whirling, splashing, etc. (turbulence) not desired in jet pumps (R. 600a, 703a, 704a).

**3. "The witnesses for the Urquharts insist that the nozzle of Wagener's foam chamber is an 'injector'[5] and therefore has a smooth bore. If it has a smooth bore, they say, it could not bring a liquid to a proper turbulence whereby it could entrain or enmesh sufficient air to make a good foam. But not only is this assertion contradicted, as we have said, by evidence which the court below found credible, but it is virtually obliterated by the Urquharts' admission in the specifications that a spiral or baffle in the nozzle of the chamber while 'advantageous' for creating foam is not 'absolutely necessary' " (Dec. 5/31/49, p. 4).**

The final conclusion and reasoning in this quotation from the Appeals Courts' decision is fallacious and based on a misinterpretation of the Urquharts' specification not indulged in by the District Court. Reference to the immediately preceding finding and the discussion thereof, and the claims of the Urquharts'

patents themselves we submit, shows the fallacious interpretation of the specifications indulged in by the Appeals Court. It is the turbulence in chamber 11, not in nozzle 12, that is claimed to be the Urquharts' invention and nowhere is there any suggestion in the patents that this critical turbulence is not "absolutely necessary". The testimony of all witnesses (R. 43a, 44a, 130a to 132a), including respondent's witnesses Ketterer (R. 621a, 622a), Lindeman (R. 245a), McNulty (R. 297a, 298a), and Durfee (R. 97a), shows that turbulence in the foam forming chamber is necessary to make mechanical fire foam. The testimony of plaintiff's witnesses and respondents witnesses Ketterer and Lindeman show that such turbulence is detrimental in jet pumps (R. 600a) even so-called "water jet air pumps (R. 697a, 698a, 703a, 704a) and is avoided in the jet pump art and by jet pump engineers (R. 581a). The undisputed testimony of Ketterer shows that this very turbulence was in the minds of the Urquharts when they first approached him (R. 89a, 621a) and that he as a jet pump engineer representing the Schuette and Koerting Company, the only substantial manufacturer of dispersion type jet air pumps (R. 232a), deemed their idea revolutionary (R. 616a, 620a, 621a). The undisputed testimony also shows the conventional dispersion type jet air pump originally supplied the Urquharts was modified in accordance with the Urquharts suggestion to get the desired turbulence and flow (R. 47a, 578a, 580a, 584a) and after modification was deemed satisfactory (R. 51a, 582a). The testimony of respondent's witness Durfee further shows that respondent itself deemed the well known and conventionally designed jet pump unsatisfactory (R. 97a) and necessitating modification to produce satisfactory mechanical fire foam (R. 97a, 98a), and the commercial devices of Pyrene embody the necessary modifications, slight

though it might be, to get the desired turbulence in the foam forming chamber (Defendant's Exhibit D-6, R. 469 to 484a). The evidence, therefore, confirms rather than discredits the Urquharts' contentions in the instant quotation from the Appeals Courts' opinion.

**4. Wagener disclosed a process or method so similar to that of the Urquharts that it is clear that he forestalled them in all essential respects (Dec. 5/31/49, p. 5).**

This conclusion for the foregoing reasons is unsupported by the record in this case.

**5. "Improvement will not sustain invention and at most the insertion of a baffle or spiral in a nozzle can constitute nothing more than mechanical ingenuity" (Dec. 5/31/49, pp. 5, 6) and "But we state again that improvement of a disclosed process cannot constitute invention" (Dec. 5/31/49, p. 6).**

The conclusions here expressed, taken at face value, contravene the law of patents as announced by this Court in the decisions referred to in Point 1, ante, and the patent Statute therein referred to.

**6. There is also no doubt that the Urquharts' process was extensively and successfully used during World War II, particularly by the United States Navy (Dec. 5/31/49, p. 6).**

This very process and apparatus was, as the record clearly shows, deemed by wholly disinterested specialists of the Navy Department, War Department, and Maritime Commission to be an extremely valuable contribution to the art warranting payment to the Urquharts of large sums of money as licensees under the patents and manufacturer's agreement here in suit deemed valid inventions supporting such payments (R. 152a, 214a, 215a).

**7. "We are of the opinion, as was the court below, that the reason why the Urquharts' process has achieved substantial commercial success was the cheapening of stabilizers" (Dec. 5/31/48, pp. 6,7).**

The evidence before the courts shows saponin, sufficiently cheap to warrant its use in chemical foam, was suitable for the Urquharts' process (R. 37a, 95a, 132a, 281a, 393a) and there is no evidence to show it would not have been used if it had been offered in lieu of those actually used.

**8. "But Burmeister's British Patent, No. 251,950 of 1927, discloses a very similar arrangement to supply a premix of water and stabilizer to an ejector which sucks in gas-producing chemicals thereby converting the premix into chemical foam" (Dec. 5/31/49, p. 7).**

This conclusion, we submit, results from the Appeals Courts' failure to appreciate the structural and functional difference between the Urquharts' and Burmeister's respective apparatus and its fallacious views as to inventiveness of improvements.

**9. "The fact is that the premixing equipment of the old art of making chemical foam functions in an identical manner whether it be connected to a water-jet air pump introducing gas-producing chemicals to create chemical foam or to a pump for introducing air to make mechanical foam" (Dec. 5/31/49, p. 7).**

This finding overlooks the well established rule that a combination is inventive and patentable even if all elements of the claimed combination are old so long as the combination of elements as an entirety effects a new and useful result not previously obtained. In the instant case, the claimed elements, a liquid aspirator and a dispersing jet educator connected in series, constitute a novel combination of elements and produce satisfactory mechanical fire foam, a result never before obtained.

**10. "The apparatus claims are void as functional" (Dec. 5/31/49, p. 7).**

The cases cited fail to support the Courts' position since they involved means claims where the specification suggests but one structure for accomplishing the desired result, and the means form of claim was, therefore, indefinite and broader than the invention (the Halliburton case) or the claims were of different form and the court actually failed to rule that the claims were functional (the Leeds & Catlin case) or the wording was not the repeatedly approved form of means followed by a statement of function (the Garratt case).

Believing the Court of Appeals opinion did not, in law, constitute an affirmance of the District Courts' ruling of misuse, petitioners on June 7, 1949, filed a second petition for rehearing seeking clarification of the opinion in this respect and suggesting modification of the last sentence of the Court of Appeals opinion to specifically exclude any inference that the misuse defense had been approved. This second petition was denied on June 19, 1949.

**Jurisdiction.**

The jurisdiction of this Honorable Court is invoked under Title 28, United States Code, Sec. 1254 (1).

## B.

## REASONS RELIED ON FOR ALLOWANCE OF THE WRIT.

Point 1. The Circuit Court of Appeals for the Third Circuit in holding "Improvement will not sustain invention and at most the insertion of a baffle or spiral in a nozzle can constitute nothing more than mechanical ingenuity." (Dec. 5/31/49, pp. 5 and 6) and that "But we state again that improvement of a disclosed process cannot constitute invention." (Dec. 5/31/49, p. 6) has decided a question of

federal law in conflict with the decisions of this court in *Goodyear Tire and Rubber Co. Inc.* v. *Ray-O-Vac. Co.*, 321 U. S. 275, 64 S. Ct. 593, 88 L. Ed. 721, *Eibel Process Co.* v. *Minn. & Ontario Paper Co.*, 261 U. S. 45, 43 S. Ct. 322, 67 L. Ed. 523; *Bene* v. *Jeantet*, 129 U. S. 683, 9 S. Ct. 428, 32 L. Ed. 803; *Cochrane* v. *Deener*, 94 U. S. 780, 24 L. Ed. 139 and is in direct conflict with Revised Statute 4886, 35 U. S. Code, Sec. 31.

Point 2. That the Circuit Court of Appeals for the Third Circuit in holding (Dec. 5/31/49, p. 4) that Urquhart et al patent 2198585, because of the statement in the specification that "This action is not absolutely necessary for the present invention but it is advantageous." (Page 1, col. 2, lines 40 to 42 of the patent), is a concession that turbulent flow of the mixture to insure good contact between it and the gas or air is not necessary (Dec. 5/31/49, p. 4) has rendered a decision in conflict with the unappealed decision of the District Court of the Unted States for the District of Columbia in the case of *Radcliffe Morris Urquhart et al.* v. *Conway P. Coe*, Commissioner of Patents, Equity No. 65,495 (R. 497a to 500a).

Point 3. That the Circuit Court of Appeals for the Third Circuit in holding that Urquhart et al patents 2106043 and 2198585 were anticipated by Wagener's patents, British No. 272993 of 1927, United States No. 1821914 of 1931, and German No. 521973 of 1931, (Dec. 5/31/49, p. 5), were devoid of invention over said patents (Dec. 5/31/49, p. 5), or British patent 251950 of 1927 to Burmeister (Dec. 5/31/49, p. 7), and that the apparatus claims of Urquhart et al patent are void as functional (Dec. 5/31/49, p. 7) has based its decision upon evidence not before it as proof on the substantive issues of the case and disregarded the clear evidence of invention and patentability in the record and the common public knowledge and has in that respect so far departed from the accepted and usual course of judicial proceedings as to call for an exercise of this Court's power of supervision.

Point 4. That the Circuit Court of Appeals for the Third Circuit in generally affirming the District Court's judgment of October 1, 1946, has, at best, inferentially decided an important question of federal law, namely, the legality of a licensing system intended to be used by defendants which has not been, but should be, settled by this court.

Point 5. That the Circuit Court of Appeals for the Third Circuit in affirming the District Court's judgment of October 1, 1946, containing paragraph 6 holding defendants' licensing system to be a misuse of Urquhart et al patents 2106043 and 2198585 (Dec. 5/31/49, p. 8) after holding a decision by it on this question unnecessary and refusing to independently pass on this question has unnecessarily and unwarrantly prejudicially affected the contractual rights of the Urquharts and others operating under like licensing systems and has, in that respect, so far departed from the accepted and usual course of judicial proceedings as to call for an exercise of this Court's power of supervision.

Point 6. That the Circuit Court of Appeals for the Third Circuit in affirming the District Court's judgment of October 1, 1946, containing paragraph 6 holding defendants' licensing system to be a misuse of Urquhart et al patents 2106043 and 2198585 (Dec. 5/31/49, p. 8) has rendered a decision deciding a federal question in a way probably in conflict with the decisions or principles of this Court in the cases of *Federal Trade Commission* v. *Cement Institute*, 333 U. S. 683, 68 S. Ct. 793, 92 L. Ed. 1010, *Corn Products Ref. Co.* v. *Federal Trade Commission*, 324 U. S. 726, 65 S. Ct. 961, 89 L. Ed. 1320, and *Federal Trade Commission* v. *A. E. Staley Manufacturing Company*, 324 U. S. 746, 65 S. Ct. 971, 89 L. Ed. 1338.

**The Importance of the Case.**

The Urquhart patents here in suit are basic patents insofar as the commercial use of mechanical fire foam is concerned and the business of making equipment and using

the process under them amounts to thousands of dollars a year and is constantly growing. In that business, petitioners have an important interest.

Furthermore, the licensing plan here involved is in general use by many businesses having similar patent rights and involving many thousands of dollars a year additional. Petitioners are interested in certain of these other businesses and, therefore, have an important interest in a decision of this question apart from the present case.

Wherefore your petitioner respectfully prays that a Writ of Certiorari be issued under the seal of this court, directed to the United States Circuit Court of Appeals for the Third Circuit, sitting at Philadelphia, Pennsylvania, commanding said court to certify and send to this Court on a day to be designated, a full and complete transcript of the record and all proceedings of the Circuit Court of Appeals had in this cause, to the end that this cause may be reviewed and determined by this Court; that the judgment of the Circuit Court of Appeals be reversed, and that petitioners be granted such other and further relief as may seem proper.

Dated, Philadelphia, Pennsylvania, July 22, 1949.

C. Brewster Rhoads,
Montgomery, McCracken, Walker,
& Rhoads,
*Attorneys for Petitioners,*
1421 Chestnut Street,
Philadelphia 2, Pennsylvania.

# Supreme Court of the United States

OCTOBER TERM, 1949.

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No.

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RADCLIFFE MORRIS URQUHART and GEORGE G. URQUHART,
*Petitioners,*

v.

PYRENE MANUFACTURING COMPANY, *Respondent.*

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## BRIEF IN SUPPORT OF THE PETITION FOR CERTIORARI.

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### STATEMENT OF THE CASE.

THE OPINIONS OF THE COURTS BELOW: The opinions of the Third Circuit Court of Appeals are reported at ..... F. (2d) ....., 81 USPQ 455 (original) and 168 F. (2d) 310, 77 USPQ 492 (on rehearing) and respectively appear in the supplements to the printed appendices together forming the certified record.

The opinion of the District Court is reported at 71 USPQ 55 only and appears at page 396a of the certified record.

JURISDICTION: The jurisdiction of this Honorable Court is invoked under Title 28, United States Code, Sec. 1254 (1) reading as follows so far as it is pertinent:

"§1254. Courts of appeals; certiorari; appeal; certified questions.

Cases in the courts of appeals may be reviewed by the Supreme Court by the following methods:

(1) By writ of certiorari granted upon the petition of any party to any civil or criminal case, before or after rendition of judgment or decree;

* * * "

THE ISSUES ARE:

(1) Invention

(2) Infringement

(3) Propriety of a court of appeals affirmance of a District Court judgment, including a point of law held by the court of appeals to be unnecessary to decide after refusal of the court of appeals to independently pass on the point of law.

FOREWORD: The present brief is an amplification of the asserted errors and disagreements of the courts below as to the facts, the lower courts' conclusions of lack of invention in the patents in suit and non-infringement of the apparatus claims thereof, and the assertedly improper action of the court of appeals in affirming a District Court judgment, including a point of law not passed upon by the court of appeals. The petition itself, in order to emphasize the disagreement on fact findings appearing respectively in the District Court opinion and the two court of appeals opinions, contains a complete statement of the case. To avoid unnecessary repetition, an additional statement will not be repeated here and this Court is respectfully referred to the statement of the case in the petition for the purpose of considering the following argument, the point headings of which relate back to the corresponding point headings under the petition heading "Reasons Relied Upon For Allowance of The Writ".

These reasons also constitute a summary of the argument and their repetition here is not deemed necessary.

## ARGUMENT.

Point 1. The Court of Appeals in asserting "Improvement will not sustain invention * * * ", we submit, shows a preconceived disposition on the part of the Court to unduly and improperly limit the field of invention to such an extent that no progress in the arts today could rise to the dignity of invention. In this respect, the Court of Appeals has adopted much the same philosophy adopted by one of our 19th century Commissioner's of Patents in resigning as Commissioner. Such preconception, we submit, lies at the source of the Court's unfavorable rulings on invention in this case and has deprived petitioners of an unbiased consideration on the merits of the evidence adduced in this case.

That this view on invention is contrary to accepted law is shown by a long line of decisions of this Court, of the other United States Circuit Courts of Appeal, even the Third Circuit Court of Appeals itself, and the United States District Courts, too numerous to cite here. While it is believed that this Court should and will judicially notice the flagrant error in the lower Court's views on this basic question, the error is particularly apparent because of its conflict with the decisions of this Court in *Goodyear Tire and Rubber Co. Inc.* v. *Ray-O-Vac Co.*, 321 U. S. 275, 64 S. Ct. 593, 88 L. Ed. 721, *Eibel Process Co.* v. *Minn. & Ontario Paper Co.*, 261 U. S. 45, 43 S. Ct. 322, 67 L. Ed. 523; *Bene* v. *Jeantet*, 129 U. S. 683, 9 S. Ct. 428, 32 L. Ed. 803, and *Cochrane* v. *Deener*, 94 U. S. 780, 24 L. Ed. 139.

In the Goodyear case decided February 28, 1944, this Court held invention existed in a battery improvement consisting in the mere substitution of a metal flash light battery casing for a paper casing where it solved problems existing for years and when the patentees invention was introduced on the market "it commended itself to the pub-

lic as evidenced by marked commercial success". (Page 279 of decision).

In the Eibel case decided February 19, 1923, this Court held there was invention in an improvement in paper making machinery consisting of mere tilting up of an existing part of the conventional machine to give the paper stock the added force of the down hill flow where the improvement increased the production ability of the machines, an end sought "for years", (Page 53 of decision) and where the improvement was generally adopted by the trade (Page 56 of decision).

In the Bene Case decided March 5, 1889, this Court held there was invention in an improvement in a method of refining hair consisting of the use of a particular corrosive acid bath (Page 686 of the decision).

In the Cochrane case decided in 1876, this Court held there was an invention in an improvement in a process consisting in a combination of steps old for other purposes (Page 785-786 of the decision).

It is clear, therefore, that a mere improvement, even a slight improvement, can form the basis of a patentable invention and, we submit, if the need existed as it here did (R. 34a, 35a, 122a), was supplied by the very process and means claimed as the invention as it here was (R. 97a, 98a, 124a, 125a, Exh. D-21, R. 559a), and the claimed inventions commended themselves to the public as evidenced by marked commercial success as was the case here (R. 123a, 126a-129a, 212a, 216a), the improvement constituted an invention entitling the patentees to the protection afforded by the patents.

Certainly this success cannot be discounted on a theory that a cheaper stabilizer was the thing which held back the commercialization of mechanical foam and was responsible for the established success where the evidence shows, as it here does, that the very stabilizers, cheap enough to be extensively used commercially in the chemical foam processes, common as sugar throughout the world, (R. 32a),

and in different mechanical foam processes in Europe (R. 42a, 392a) are concededly suitable for the Urquharts' process (R. 95a, 132a). It was furthermore recognized as suitable by Pyrene in 1925 (R. 446a) and recognized and used by others (R. 42a, 133a, 3920, Exh. D-8, D-9, R. 501a, 502a).

This preconception is also, we submit, in direct conflict with the Federal Patent Statutes, Revised Statute 4886, 35 U. S. Code, Sec. 31 which reads as follows:

> "Any person who has invented or discovered any new and useful art, machine, manufacture, or composition of matter, or any new and useful improvements thereof, or who has invented or discovered and asexually reproduced any distinct and new variety of plant, other than a tuber-propagated plant, not known or used by others in this country, before his invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country, before his invention or discovery thereof, or more than one year prior to his application, and not in public use or on sale in this country for more than one year prior to his application, unless the same is proved to have been abandoned, may, upon payment of the fees required by law, and other due proceeding had, obtain a patent therefor. R. S. § 4886; March 3, 1897, c. 391, § 1, 29 Stat. 692; May 23, 1930, c. 312, § 1, 46 Stat. 376; Aug. 5, 1939, c. 450, § 1, 53 Stat. 1212."

For the foregoing reasons, we submit, the Circuit Court of Appeals in reaching the decisions that it did reach on validity of the patents here in suit was acting on an erroneous belief as to the established law on invention, contrary to the law as laid down in the decisions of this Court, contrary to the patent Statutes, and that, therefore, this Court should issue a writ of certiorari to review the lower courts' rulings on patent validity for this reason alone.

Point 2. The Urquhart specification in stating "This action is not absolutely necessary for the present invention but it is advantageous." was, as the Court of Appeals

clearly stated (page 4 of its May 31, 1949, decision), speaking of subdivision within the nozzle 12. What happens within the nozzle 12 is wholly immaterial SO LONG AS THE LIQUID STREAM AS IT LEAVES NOZZLE 12 AND CONTACTS THE AIR IN THE FOAM-FORMING CHAMBER HAS TURBULENCE SUFFICIENT TO ASSURE THE ASPIRATION AND MIXING OF SUFFICIENT AIR. This distinction between the action in nozzle 12 and the turbulent flow taught by the Urquharts and claimed by them as the essence of their method invention has consistently escaped the Courts below and has led them to treat subdivision in nozzle 12, due to inclusion of the spiral or baffle in nozzle 12, as the claimed and necessary subdivision of the Urquharts' method claims. This is clearly not the case and the United States District Court for the District of Columbia so held in the case of *Radcliffe Morris Urquhart et al* v. *Conway P. Coe*, Commissioner of Patents, Equity No. 65495 (R. 497a to 500a). There is, therefore, a clear conflict of opinion between the latter Court and Courts below on this question.

In ruling this portion of the specification is a concession by the Urquharts that "turbulent flow" is not necessary, the Court of Appeals, we submit, committed obvious and prejudicial error. In this connection "turbulent flow of the mixture" in the foam forming chamber 11 (page 1, col. 2, lines 23 to 26) is the essential teaching of the Urquhart method (the Urquhart invention) and in addition to being taught in the specification is consistently claimed in the method patent claims. This inventive feature is claimed by the words imparting "* * * a high degree of turbulence to the body of said stream of liquid, thereby finely subdividing the same * * *" (Claim 12 of 2106043, claim 1 of 2198585). This misinterpretation of the patent documents here in suit, we submit, is responsible, at least in large part, for the lower courts' erroneous specific holdings of non-invention and invalidity of petitioners' method claims.

As Pyrene's own witnesses, Lindeman and Ketterer clearly stated, turbulent flow beyond the motivating nozzle (nozzle 12 of the Urquhart patents in suit) is most readily obtainable and controlled by a spiral in the motivating nozzle (R. 569a, 697a), but may be obtained by a plurality of issuing jets impinging one upon the other beyond the end of the motivating nozzle (R. 236a), by increasing the flow of liquid through the motivating jet to such an extent that the discharged stream will not "just fill" the orifice of the tail piece (R. 241a, 580a, 600a), or by varying the distance between the discharge end of the motivating nozzle and the orifice of the tail piece (R. 234a). These same witnesses also testified that conventional jet pump practice (water jet air pump practice, if it is desired to use the terminology adopted in the Wagener prior art patents relied upon by the lower courts) required that every possible means be adopted to avoid such turbulent flow (R. 697a, 698a, 703a, 704a). This testimony together with that of petitioner's witnesses, we submit, fully explains the need for and the intent of this particular portion of the Urquhart's specifications and itself establishes the error in the lower courts' interpretations of this portion of the specifications.

The District Court for the District of Columbia in its holding (R. 497a to 500a) that the specification of Urquhart application Serial No. 638,272 (patent 2198585 containing the same specification appearing in patent 2106043) disclosed the invention of claim 28 (claim 1 of patent 2198585) recognized this material difference between subdivision in nozzle 12 and the turbulent flow claimed in the Urquhart patents. The District of Columbia Court, therefore, contrary to the Courts below and in line with this testimony, found that the Urquhart's specification contained the teaching, albeit the necessity, of the turbulent flow of the mixture defined in claim 1 of patent 2198585 and also included in process claims 12 and 14 of patent 2106043 and claim 2 of patent 2198585.

This testimonial and documentary evidence, which is nowhere controverted, except by statements of Pyrenes' counsel, clearly shows that subdivision in nozzle 12 is "not absolutely necessary" to obtain the turbulent flow beyond the motivating nozzle claimed by the Urquharts as their invention and which all commercial mechanical foam methods, including Pyrene's method utilizing the equipment here in suit (R. 97a, 297a, 298a), use.

We submit, therefore, that the Courts below in the instant case have reached a conclusion regarding the teaching of the Urquhart specifications which is diametrically opposed to the conclusion reached by the District of Columbia Court. For this further reason, we feel this Court should issue a writ of certiorari to review the decisions of the Courts below and resolve the conflict existing between the decisions of the third Circuit Courts and the District of Columbia Court.

Point 3. The Circuit Court of Appeals in holding the method claims of Urquhart et al patents 2106043 and 2198585 to be anticipated by the Wagener patents and the Urquhart apparatus claims of patent 2106043 devoid of invention over Burmeister British patent 251950, or functional, disregarded the evidence in the record and the common public knowledge, and even disregarded Pyrene's own teachings as to turbulence shown in its commercial structures (R. 97a, 297a, 298a) and its own patents (R. 490a to 496a) subsequent to its Wagener patents.

Turning first to the Wagener patents, the record shows (and Pyrene contends nothing more) that these patents at best suggest mechanical production of foam utilizing conventional jet pumps (water jet air pumps as defined in the Wagener patents). The Wagener patents themselves, as the District Court rightly held (R. 398a, 399a), do not, either expressly or impliedly, call for special means to give the stream any particular kind of turbulence or subdivision of any higher degree of either than it would acquire by being discharged from a smooth-bore nozzle. Pyrene,

while contending in this case that the conventional jet pumps will make good fire foam (R. 97a, 301a-303a), advocates in its Timpson patent 2356286 (R. 493a) use of the Timpson motivating nozzles of application Ser. No. 417220 filed October 31, 1941 (patent 2386918), or Timpson patents 2057218 and 2146605. Each of these advocated patents, like the Urquhart patents here in suit, specifically teach that turbulent flow of the mixture, expansion of the surface area, or similar modification of the stream beyond the motivating nozzle to assure good contact between the stream and the gas or air is necessary to make fire foam. This same teaching is used in all of the Pyrene Commercial structures in suit, in the structures required by the United States Navy, and in all other commercial structures offered on the market. As a matter of fact, these very Timpson patents acknowledge that sufficient air to make fire foam will not be entrained in a jet orifice of a given diameter because the quantity of air that can be entrained is limited by the surface area of the stream. This same view is expressed by Pyrene's witnesses, Lindeman (R. 234a, 238a, 241a, 245a) and Ketterer (R. 571a), by all of petitioners witnesses, and by the Frederich patent (R. 337a), under which Pyrene was licensed (R. 459a, Exh. D-4-N) until the District of Columbia Court held that the Urquharts, who had obtained a record judgment over Frederich in Interference 70,803 taught this invention.

It is significant that the only basis for holding that good foam is made by a conventional jet pump is Judge Kirkpatrick's personal opinion (R. 401a) based on Pyrene's motion pictures which admittedly (R. 358a-360a, 368, 369) and contrary to Judge Kirkpatrick's expressed view did not put out a gasoline fire. In spite of this fact, in the face of Captain Burke's unequivocal testimony that these pictures were valueless (R. 294a, 295a, 365a), and in spite of the testimony of Pyrene's witnesses, Lindeman and Ketterer, that alterations and adjustments, both as to size and position, of the jet pump nozzle to the tail piece of a jet

pump would produce turbulent flow (R. 241a, 580a, 600a), the Court of Appeals held that the evidence showed good foam could be made without utilizing the Urquhart's invention. We submit, such pictures can not be relied upon since a picture of a water stream alone looks like foam as this Court can clearly see for itself by comparison of the Urquhart photographs (R. 511a to 545a) to the water stream shown in any publication of general circulation, such as the August 27, 1948, Sports Final issue of the Philadelphia Evening Bulletin, front page, and that the very alterations and adjustments which the Court of Appeals mentioned (page 4 of its May 31, 1949, opinion) are of the very nature which Pyrene's above named witnesses testified would produce the turbulent flow taught by the Urquharts and avoided by jet pump engineers.

The Courts below, in spite of all of this evidence, and in spite of their own findings that the claimed invention of the Urquharts was an improvement over Wagener (R. 401a, Dec. 5/18/48, p. 3, Dec. 5/31/49, p. 5), and had attained substantial commercial success (R. 403a, Dec. 5/18/48, p. 3, Dec. 5/31/49, p. 6), found that there was no invention over the Wagener patents (District Court, R. 402a) or that the Wagener patents anticipated the Urquharts' patented method (Court of Appeals, Dec. 5/18/48, p. 3, Dec. 5/31/49, p. 5).

With regard to the Urquharts apparatus claims, the record shows that no one prior to the Urquharts had ever suggested an apparatus consisting, respectively, of a jet pump having a smooth bore nozzle and a jet pump having a spiral baffled nozzle arranged in series to respectively introduce and mix a powder or solution into a motivating water stream and then mix into the resulting mixed stream of water and powder or solution a free gas such as air. It is nowhere contended that an apparatus in which two jet pumps, each having smooth bore nozzles, arranged to successively transmit a water stream therethrough is the invention of the Urquharts. Obviously such a contention could not be advanced for the British patent to Burmeister

251950 (R. 662a) clearly suggests such a structure. Recognizing this fact the Urquhart apparatus claims herein suit (claims 4, 5, 11 and 15 of patent 2106043), to distinguish from this broad apparatus suggestion of Burmeister, among other things define the second jet pump acting on the mixture produced by the first jet pump as:

> "Means for exposing the resultant mixture to gas in a manner to cause commingling of said gas with said mixture, and means for increasing the surface of said mixture exposed to said gas." (Claim 4)
>
> "A foam-forming chamber into which the mixture from the ejector chamber passes, a gas line entering said foam-forming chamber, and a hose connected to receive and discharge the foam produced in said chamber." (claim 5)
>
> "Means for ejecting the resulting liquid at high velocity from a nozzle in such a manner as to impart a high degree of turbulence to the body of said stream of liquid, thereby finely subdividing the same, and means for entraining a gas into and by means of the resulting stream of subdivided liquid." (claim 11)
>
> "Means for ejecting the resulting liquid at high velocity from one or more nozzles, in such manner as to impart a high degree of turbulence to the body of said stream of liquid thereby finely subdividing the same, and means for aspirating a gas into and by means of the resulting stream of subdivided liquid." (claim 15)

Both Courts below recognized that this definition of the Urquharts' apparatus distinguished the Urquharts' apparatus from that of Burmeister (R. 404a, Dec. 5/18/48, p. 3, Dec. 5/31/49, p. 7). Pyrene's witnesses, Lindeman and Ketterer, both testified that mixing of a free gas or air with a stream of water could not be accomplished by use of a jet pump having a smooth bore nozzle (R. 245a, 571a, 710a), the only jet pumps suggested by Burmeister and that a dispersed jet type of air pump was necessary to accomplish such a mixing (R. 241a, 571a). It follows, therefore, that these claims define a combination of

elements not only different from that suggested by Burmeister but apparatus which in its functional action on the stream of water accomplished entirely different results due to the conjoint action of the claimed elements. It follows, therefore, that these apparatus claims, contrary to the holdings of the Courts below, in and of themselves define a definite and novel coaction of the elements never before suggested in the art.

While it is true that claims 4, 11 and 15 employ the long approved, but recently criticized, "means" plus functional form of definition, claim 5 is not subject to this criticism and the disclosure of the Urquharts' specifications clearly suggest spirals or other baffles in the nozzle 12 for producing the critical turbulent flow beyond the nozzle at point of contact with the gas or air taught by the Urquharts' method. This being true the situation, which this Court passed on in the case of *Halliburton Co.* v. *Walker*, 329 U. S. 1, is not present in this case and the form of claim here before the Court was not involved in the case of *Leeds & Catlin* v. *Victor Talking Machine Co.*, 213 U. S. 301 or *In re Garrett*, (CCPA) 63 F. 2d 113. We submit, therefore, that the Courts below clearly erred in holding these claims do not disclose invention over Burmeister or are invalid as being functional.

Insofar as infringement is concerned, the District Court properly, we submit, held there was no question as to infringement of the method claims, if such claims were valid, (R. 397a) and the Court of Appeals clearly did not disturb this holding. Insofar as the apparatus claims are concerned, the District Court held Pyrene did not infringe because the Pyrene commercial nozzles did not embody the series arrangement required by these claims (R. 404a). This holding likewise was not disturbed by the Court of Appeals decision. This conclusion appears to be based on the fact that because Pyrene divides its stream, utilizing a portion only of it to introduce the stabilizer into said portion, and then brings the divided portions of the

stream together at the point of mixture of the gas the series arrangement is not present.

Clearly this conclusion is not warranted since the Pyrene devices first introduce the stabilizer into a portion of the stream and then introduce the gas into this resultant mixture along with the remainder of the water (R. 469a to 484a), the mixture and water both being in turbulent flowing condition, at this latter stage, as taught and claimed as the invention of the Urquharts.

For these reasons, we submit the Courts below disregarded the clear evidence in this case, decided the questions of invalidity and infringement in a manner contrary to the accepted and usual course of judicial proceedings, and that this Court, for this further reason, should issue a writ of certiorari to exercise the supervisory powers of this Court.

Point 4. The defense of improper use decided by the District Court (R. 404a-407, 408a) and held to be unnecessary for decision by the Court of Appeals (page 8 of the May 31, 1949, decision in the appendix to the record, we submit, constitutes an important Federal question which should be settled by this Court and was, at best, affirmed without an independent consideration by the Court of Appeals.

Since this question, as the record shows, is predicated on a similar licensing system used by American Fomon Company and in commercializing chemical foam (R. 736a) and by petitioners and National Foam System (R. 731a, 747a), Fire Appliance Company (R. 731a), and Walter Kidde Company (R. 731a, 751a), in commercializing mechanical foam, the District Courts ruling, unless modified, will prejudice all the named parties in the conduct of their respective businesses. Accordingly, it seems clear that this phase of the present litigation involves important Federal question, which should not be determined by an off hand affirmance by a Court of Appeals of a District Court judgment. We submit, therefore, that this Court should either take this case on certiorari and decree a modification of the District Court judgment or definitely pass on this question.

Point 5. The May 31, 1949, opinion of the Circuit Court of Appeals clearly shows that the Court felt a decision on the merits of the misuse defense to petitioners counterclaim was unnecessary in view of its decision of the validity and invention questions and that the Court was not passing on the merits of this defense. In spite of this, the last sentence of this very opinion affirms the District Court judgment which includes a specific paragraph 6 (R. 408a) adjudging the petitioners' licensing system to be a misuse of the patents in suit.

We submit, that accepted and orderly judicial proceedings required the Court of Appeals to affirm the District Court judgment only to the extent that it expressed opinions on matters considered by it. Their failure to so limit their affirmance, we submit, casts a cloud of indefiniteness on the adjudications in this litigation which will prejudice not only petitioners but all others named above using the same or similar licensing system. We, therefore, submit this action of the Court below constitutes such a departure from the accepted and usual course of judicial proceedings as to call for an exercise of this Court's power of supervision.

Point 6. The ruling of the District Court on the asserted misuse defense, we submit, compels a patentee to disregard (1) differences in the nature of rights granted under his patents, (2) differences in cost to the patentee in granting and checking on the performance of obligations undertaken by the grantee of such rights, and (3) services rendered to the patentee by the grantor by reason of the Courts ruling that an ultimate user of a patented process cannot be charged a royalty sufficiently greater than that paid by a manufacturer who enters into an agency agreement empowering the manufacturer to grant process licenses to its user customers. The Court of Appeals action in affirming the District Court judgment, including a holding of misuse based solely on such a differential in royalty, we submit, will be asserted as an affirmance of the District Court on this question and, therefore, will be generally treated as an

approval of this ruling. As a consequence, petitioners, the others named above, and anyone operating under a similar licensing system will be unjustly prejudiced in carrying out their licensing system, which we submit is entirely legal and above reproach.

In this connection, we submit, the decisions of this Court in *Federal Trade Commission* v. *Cement Institute*, 333 U. S. 683, 76 S. Ct. 793, 92L. Ed. 1010 in *Corn Products Refining Co.* v. *Federal Trade Commission*, 324 U. S. 726, 65 S. Ct. 961, 89 L. Ed. 1320 and *Federal Trade Commission* v. *A. E. Staley Manufacturing Company;* 324 U. S. 746, 65 S. Ct. 971, 89 L. Ed. 1338 determined it to be proper and necessary for a seller to recognize differences in cost of transportation in setting prices for his products to differently situated customers. We submit it is equally proper and necessary for a patent owner to recognize differences in the situations of those seeking rights under its patents and that, as in the above mentioned Federal Trade cases, the correct point to determine the presence or absence of discrimination in patent grants involving users on the one hand and manufacturers empowered to grant user licenses where as here any manufacturer can obtain an agency agreement is the royalty received by the patent owner.

We, therefore, submit that the decision of the District Court below constitutes a decision of an important Federal question in a way probably in conflict with the decisions or principles of the above identified cases of this Court and that, therefore, this Court should grant certiorari to settle this question.

Respectfully submitted,

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# Supreme Court of the United States

OCTOBER TERM, 1949.

No. 206.

RADCLIFFE MORRIS URQUHART and GEORGE G. URQUHART,
*Petitioners,*

v.

PYRENE MANUFACTURING COMPANY, *Respondent.*

## PETITIONER'S REPLY BRIEF ON PETITION FOR WRIT OF CERTIORARI TO THE CIRCUIT COURT OF APPEALS FOR THE THIRD CIRCUIT.

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# Supreme Court of the United States

OCTOBER TERM, 1949.

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RADCLIFFE MORRIS URQUHART and GEORGE G. URQUHART,
*Petitioners,*

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PYRENE MANUFACTURING COMPANY, *Respondent.*

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## PETITIONER'S REPLY BRIEF ON PETITION FOR WRIT OF CERTIORARI TO THE CIRCUIT COURT OF APPEALS FOR THE THIRD CIRCUIT.

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### Introduction

Petitioners are reluctant to burden the Court with a reply brief since they feel their petition and supporting brief clearly justify the grant of the requested writ. However, from a careful analysis of the opinions of the Courts below, it is quite apparent that neither the District Court nor the Court of Appeals clearly understood the position and claim of invention of petitioners. Respondent's brief here is calculated to mislead this Court just as the lower Courts were misled. Respondent's brief here contains misrepresentations, half-truths, and assertions beyond the scope of the record evidence. They are similar to those made to the

Courts below and they are intended to obscure the simple issue or claim of invention made in this case.

We strongly feel that had the Courts below truly understood the record in this case and the position of petitioners, they could not have arrived at the conclusion they did, namely, that petitioners did not invent anything even though admittedly they devised a practical and workable method for making mechanical foam and substantially advanced the art of making mechanical fire foam. For this reason and to avoid the possibility of a misunderstanding on this petition, petitioners will endeavor to again explain, in simple terms or layman's language, petitioners invention and position and will point out what appears to them to be the major unwarranted and unjustified assertions in respondents' brief that are designed to bring about confusion of the issues.

**The Prior Art and Petitioners' Invention and Position on Patentability**

Prior to 1929, chemical foam was well known and widely used and efforts were being made, both in this country and in Europe, to develop a commercially acceptable mechanical foam (R. 39a, 392a, 421a to 438a, 446a, 501a, 505a) and thereby avoid the objections and expense inherent in the making of chemical foam (R. 29a, 30a, 34a, 35a, 122a, 225a). In Germany in 1923, Clemens Wagener applied for a patent on a method for producing foam, which patent was granted in 1931. Wagener's method as disclosed by his patent contemplated nothing more than a straight stream of water through a nozzle, without any interruption to the flow (R. 398a, 399a) for simultaneously incorporating and mixing the water stream, a saponin stabilizer, and air. This method was never exploited nor was it successful or used commercially (R. 97a).

In 1932 the Urquharts, after demonstrating the practicability of their claimed method and proposed commercial apparatus, filed their application disclosing the method and

apparatus here in suit, very different from the Wagener method. Their method contemplated introducing a stabilizing liquid into a stream of water at one point and then introducing into the resulting stream of water and stabilizing liquid, at another point, air, or some other gas. It is at this latter point that the Urquharts' device deviated from the entire theory of the Wagener patent, in that they conceived the idea that an interruption of the forward flow of the stream of water and stabilizing fluid at the point of contact with the air or gas was necessary to make fire foam. Therefore, in their patent they suggested ways and means of "dispersing" the stream at the latter point to give the flow "turbulence" yet maintaining adequate forward energy to project or throw the foam from the nozzle. This simply means that they invented a new method of making foam by beating up in some way the mixture of water, stabilizer and air at the point of introduction of the air before letting it leave the nozzle.

The reason for avoidance of the Urquharts' proposed interruption of the forward flow of the stream by their predecessors using jet pumps was the recognized need to maintain an uninterrupted stream of water so as to preserve the forward velocity of the stream and use it to assure the projection or throw of the discharge from the nozzle, well beyond the end of the nozzle. The necessity of this projection or throw is readily apparent since without it the fireman would have to expose himself to the heat or flame to apply the discharge, whether water or foam, from the nozzle onto the fire. The fact that an interruption of the forward flow of a stream through a nozzle would seriously decrease this projection or flow is known to everyone from their own experience with the ordinary garden hose, where the manipulation of the discharge nozzle to produce a spray discharge materially restricts the extent of projection or throw of the water beyond the nozzle. The members of this Court will take judicial knowledge of this truth.

In spite of this general knowledge, the Urquharts told the fire fighting art that it was necessary to interrupt the forward flow of the water and stabilizer stream by purposely creating a dispersion or turbulent flow in the stream at the point of contact with the air in order to produce satisfactory fire foam yet maintain a satisfactory projection or throw. No one prior to the Urquharts taught this, not even Clemens Wagener or his patents (R. 398a, 399a). That this teaching is a necessary and critical step in production of commercially satisfactory fire foam is amply shown by this record (R. 48a, 55a, 132a, 164a, 401a). Pyrene itself admits it to be so (R. 97a). The evidence shows the necessary dispersion or turbulence can be obtained by use of various forms of apparatus (R. 55a, 56a, 132a, 160a, 163a, Exhibit D-6, R. 469a). The pump engineers when given the Urquharts' requirements, namely, turbulence plus as much forward throw as possible devised a special device which they called a "Mechanical Foam Machine" (R. 592a). This device was produced and supplied to the Urquharts in 1932 by Schuette & Koerting pursuant to the Urquharts' specifications (R. 603a to 607a, 620a to 623a). These last record references show that the Urquharts' requirements of dispersion or turbulence and throw necessitated modification of the conventional jet pumps, suggested by Wagener. His method contemplated employment of solid stream jet pumps used to maintain the forward flow energy to exhaust air and pull a high vacuum (R. 246a, 571a, 581a, 623a). His method also contemplated dispersed stream jet condensers which utilized this forward flow energy to create a dispersed stream to condense steam and wash air without projection or throw of the liquid beyond the end of the nozzle (R. 237a, 238a, 239a, 569a, 570a, 574a, 582a, 622a, 623a, 693a, 694a). In such condensers the water could be seen just "falling out the end" (R. 706a).

Respondent's brief (pages 8 and 9), as did its arguments below, attempts to confuse the issues by reading into the Urquhart method teaching the simple commercial apparatus by which the Urquharts suggested their method could

be most conveniently practiced. Respondent's brief represents the Urquharts' position to be that the making of good foam requires use of a spiral or baffle to obtain the dispersion or turbulence. It then makes it appear, as the Courts below were led to believe (R. 400a, 798), that the Urquhart specification actually characterized, dispersion or turbulence at the moment of contact with the gas or air, as an "action not absolutely necessary for the present invention" but one which is "advantageous." Nothing is further from the truth or more contrary to the Urquharts' patents and this record.

Turbulence plus adequate throw is always and admittedly necessary for the making of good fire foam. The type of apparatus used to create the turbulence is optional. The Urquharts suggested a means for the creation of turbulence but said in their application that the use of that particular apparatus was not absolutely necessary but was "advantageous." That apparatus had worked satisfactorily in the Urquhart experiments.

**The Method Teaching of The Urquhart Patent.** The Urquhart fire foam method is accurately defined in its simplest form in claim 13 of patent No. 2,106,043 (R. 416a) and claim 1 of patent No. 2,198,585 (R. 418a). The critical factor or method step is, "dispersion" or "turbulence at the point of contact of the solution stream and the air or gas" (R. 48a, 55a, 132a, 164a, 401a). The Urquhart method claims are submitted to be patentable under every known test used by the Patent Office and the Courts because of this critical step in the method and irrespective of the means or apparatus used to create the necessary turbulence or dispersion.

The District Court found as a fact that the teaching of the necessity of dispersion or turbulence to make fire foam is nowhere suggested by Wagener's patents (R. 398a, 399a). It, furthermore, is nowhere suggested in the jet pump art that dispersion or turbulence of a liquid at the point of

contact with air, gas, or another liquid would be useful to produce a foam mass or mix the air and water with anything (R. 243a). This fact cannot be disputed and neither the Court below nor Pyrene disputes it.

It is submitted, therefore, that this method teaching claimed by the Urquharts' is novel and stands alone and apart from any apparatus considerations and that the Courts below erred in holding that it was not patentable.

The descriptive basis for this critical feature of the Urquharts' method claims are the words "will cause turbulent flow of the mixture and insure good contact with the gas, which is injected through pipe 14." (R. 414a, col. 2, lines 24 to 26 of patent 2,106,043 and R. 419a, col. 2, lines 25 to 27 of patent 2,198,585). Nowhere does the Urquhart specification even inferentially suggest that this action, dispersion or turbulence at the point of contact with the air or gas, is not absolutely necessary. On the contrary the patents emphasize and everyone familiar with the art, acknowledges the necessity of such turbulence or dispersion. The Patent Office recognized the uniqueness and complete departure of this teaching from accepted jet pump method teachings. (Exhibit P. 3-A, not printed, page 103). Pyrene's jet pump witness Ketterer also recognized the revolutionary impact of this teaching in the jet pump art when he said "* * * Urquhart's idea was new to me and appeared to have such merit that it was worth my while to give considerable time designing a modification * * * to meet his specifications." (R. 621a).

Pyrene itself, despite its ownership of the Wagener* patents and its contrary contentions throughout this case became painfully aware, about 1933 or 1934, that this teaching was the essence of practical and successful mechanical or air foam (Exh. D-4-E, R. 450a, Exh. D-4-F, R. 452a, Exh. D-4-G, R. 455a). Not only was Pyrene made aware of this teaching but it took licenses under the asserted Frederich method disclosing the teaching, in both Great

* Wagener was the Patent Attorney for Pyrene's German affiliate (R. 94a).

Britain (Exh. D-4-H, R. 457a) and the United States (Exh. D-4-N, R. 459a) and paid out a substantial sum of money for those licenses. The Frederich invention admittedly contemplates the same method of making fire foam as does the Urquharts.

This is, of course, a technical case. Yet, an analysis of the record will clearly establish that an employee of the respondent, named Timpson (R. 103a), filed an application for a patent on a foam making device in 1934, in which he adopted the invention of petitioners, namely, the creation of turbulence in the foam forming chamber (Exhibit P-3-a, not printed, pages 44 to 50). The application for this patent was prepared by one of the members of the patent law firm that has represented respondents throughout this case. This patent application, now patent 2,057,218 referred to in the record here (R. 488a), confirms clearly and unequivocably petitioners' contentions with respect to the patentability of the method here in litigation. The application for this patent was found by the Patent Office to be claiming the same invention as that of the Urquharts, and also that of Dr. Frederich, of Germany. Interference proceedings No. 70802 were instituted and the interfering method claims in the Timpson application were cancelled. Respondents, realizing the advantages of the method and the hopelessness of their position based on the Timpson application in view of the earlier invention by the Urquharts, and realizing further that Dr. Frederich's work in Germany might be of aid to them in the priority contest, sought and obtained an exclusive license under the Frederich United States application. They cancelled their license only after the Urquharts had been held by the Patent Office to be ahead of Frederich and by the District of Columbia Court entitled to a patent over Frederich's claim that the Urquharts' application did not disclose the claimed invention.

We submit, therefore, that Pyrene's entire position in this case and defense in this suit is inconsistent with every action taken by it prior to the institution of this litigation.

Respondent's brief (pages 9 to 11), as do the Courts' opinions below (R. 399a, 401a, 796, 798, 799), assert lack of patentability of the method on the teachings of the Wagener patents, the McNulty testimony (R. 264a to 279a), and the Pyrene ex parte tests in this litigation (R. 281a to 288a, 291a to 293a). This view, we submit, is contrary to the record and resulted because the Courts were misled.

The rules of this court provide that a writ of certiorari may be granted if the lower court "has so far departed from the accepted and usual course of judicial proceedings, or so far sanctioned such a departure by a lower court, as to call for an exercise of this court's power of supervision." There has been such a departure in this case. Respondent's defense to this suit is contrary to its original contentions and the true facts, and depended for success on confusing the issues and the courts. That it succeeded is amply shown by the progress of the case below, namely, the withdrawal of the Circuit Court's original opinion and the filing of a new opinion.

**The Conflict of Opinion**

Pyrene's argument (brief 5 to 7) overlooks the fact that the refusal of the Patent Office to allow application claim 28 (claim 1 of patent 2198585) was that it had "* * * no proper basis in the disclosure and in view of the Board's decision, * * *" (Plaintiff's Exhibits P-3-a, not printed, page 103, and P-3-b, not printed, pages 213 and 266). In view of this general rejection, the District of Columbia Court received evidence as to the portions of the specification disclosing each step of the claim, including the critical step of "imparting a high degree of turbulence to the body of said stream of liquid" (R. 578a, 580a). The District of Columbia Court then held "* * * the disclosure supported claim 28 and that the Patent Office erred in rejecting it." (R. 497a, 499a). It found facts based upon its understanding of the evidence on "throw" (R. 498a)

directly involved in the controverted holding of the Courts' below as to the teaching or lack of teaching of the necessity of turbulence. We submit, therefore, that the sufficiency of the specification to support this critical method step was before the District of Columbia Court, that evidence was submitted on this question, and that the District of Columbia Court decided this question as well as the question of use of atmospheric air in favor of the Urquharts and contrary to the Courts below.

There is, therefore, presented to this Court a case in which the United States Patent Office had for consideration a patent application covering an alleged new method for making mechanical fire foam. After a hearing the Board of Appeals of the Patent Office held that the Urquharts' claims with respect to a new method of making mechanical foam were not patentable. An appeal was taken from the Patent Office to the United States District Court for the District of Columbia. After a full hearing that Court found as a fact and concluded as a matter of law that the Urquharts had invented something and were entitled to a patent on that invention. They had invented a new method of making mechanical foam.

Respondent, the Pyrene Company, a large manufacturer and somewhat of a pioneer in the commercialization of mechanical foam (R. 403a) spent money to secure a license under the identical Frederich invention, through one of its employees (Timpson) filed a patent application claiming the identical invention (Exhibit P-3-a, pages 44-50 not printed), and then after a patent was granted to the Urquharts, which made valueless their license agreement, and after avoiding a hopeless priority contest on the Timpson application, making it impossible for the Patent Office to grant a patent to Timpson, it then attacked the validity of the patents issued to the Urquharts. Its position here is predicated on its own Wagener patent rights possessed during the entire time it was making its efforts to patent

the Urquharts' method. The Courts below found in effect that the Urquharts' method had been of material assistance to the Pyrene Company in its commercialization of mechanical fire foam, that it had contributed substantially to the art of making fire foam, and that the Pyrene Company was guilty of infringing upon the Urquharts' method of making fire foam if that method was patentable. Yet it found that the Urquharts were not entitled to the protection of their patent. These Courts completely ignored the decision of the District Court of the District of Columbia, which Court held the Urquharts were entitled to a patent because they had invented something.

If there ever was a case in which there was a conflict of opinions this is it. It is extremely important that this Court determine the questions raised in this litigation so that, in event the Urquharts should file other infringement suits in other jurisdictions, the Courts in those jurisdictions should know whether they should follow the District Court of the District of Columbia or the Courts of the Third Circuit.

**The Remaining Pyrene Arguments**

Insofar as the remainder of Pyrene's brief in opposition to certiorari is concerned, it is felt that petitioner's main brief is a sufficient answer. Accordingly, no attempt will be made here to answer any other matter although it is noted that Pyrene's brief at pages 14 and 16 misrepresents petitioners' position respecting points 4, 5 and 6 of their petition.

**Conclusion**

It is respectfully submitted that if the writ of certiorari in this case is granted, petitioners can establish beyond peradventure of doubt that the courts below were in error in holding that petitioners' method of making fire foam was not patentable, and further, that the courts below predi-

cated their decisions upon a misconception of petitioners' claim, and confusion between the method for making fire foam developed by petitioners and the apparatus suggested for utilizing that method.

Respectfully submitted,

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# Supreme Court of the United States

OCTOBER TERM, 1949

**No. 206.**

RADCLIFFE MORRIS URQUHART and GEORGE G. URQUHART,
*Petitioners,*
*v.*
PYRENE MANUFACTURING COMPANY,
*Respondent.*

## RESPONDENT'S BRIEF IN OPPOSITION

### Opinions Below

The findings of fact and opinion of the United States District Court for the Eastern District of Pennsylvania (R. 396a-407a) are reported in 69 F. Supp. 555 and 71 U. S. P. Q. 55. The opinion of the Court of Appeals for the Third Circuit (R. 795-801) is reported in F. 2d and 81 U. S. P. Q. 455. An earlier opinion of that Court (R. 754-7), which was withdrawn (R. 794-5) after reargument of the case, was reported in 77 U. S. P. Q. 492. The fact that this opinion was withdrawn is noted in the index of 168 F. 2d 310. The citations given for the reports of these decisions in Petitioners' brief in support of the petition (p. 29) seem to be confused.

### Jurisdiction

Petitioners invoke the jurisdiction of this Court under Section 1254 of the Judicial Code (28 USCA section 1254). The judgment of the Court of Appeals for the Third Circuit

which petitioners seek to have reviewed was entered May 31, 1949 (R. 802), and Petitioners' petition (R. 803) to that Court to clarify its decision was denied June 18, 1949 (R. 806).

## Questions Presented

1. *As to the holding of invalidity:*

Is there any important point of law or conflict involved, and, if not, should this Court review the evidence in this case to verify the correctness of the concurrent finding of the District Court and Court of Appeals that the evidence shows Petitioners' patent claims in suit lack invention over the prior art, and involve no more than ordinary engineering skill? (See Petition pp. 25-6, Points 1-3.)

2. *As to the misuse defense:*

The District Court having dismissed Petitioners' counterclaim because of the invalidity of the patents in suit, and also having sustained a defense to the counterclaim based on Petitioners' misuse of said invalidated patents in their licensing system, and the Court of Appeals having affirmed the District Court but declined to discuss the patent misuse defense, should this Court review that question in order to give Petitioners and persons not parties to this suit an advisory opinion with respect to that defense? (See Petition p. 27, Points 4-6.)

## Statement

The complaint (R. 4a) brought by Respondent asked for a declaratory judgment as to the validity and its alleged infringement of two Urquhart patents,—2,106,043 issued January 18, 1938 (R. 414a), and 2,198,585 issued April 23, 1940 (R. 419a), on the same original application, filed October 18, 1932. These patents relate to a jet pump process and apparatus for making mechanical foam for fire extinguishing. The Urquharts answered (R. 11a) and coun-

terclaimed for infringement (R. 15a). The reply (R. 18a) reiterated the defenses of invalidity and noninfringement, and, as an additional defense, averred that the counterclaim was also barred by the Urquharts' misuse of the patents in the licensing system they had employed.

The case was tried (R. 25a-395a) in open Court in Philadelphia before Judge Kirkpatrick, who saw and heard the witnesses. After full consideration of the evidence and the briefs and answering briefs of both parties, that Court rendered an opinion (R. 396a-407a), in which it embodied its special findings of fact and conclusions of law (R. 407a). As the opinion shows, its holdings of invalidity of the process and apparatus claims in suit and of noninfringement of the latter, were based upon factual findings and involved no new or substantial question of law; and its sustaining of the misuse defense also turned on factual findings, which brought the issue within well settled law.

From the District Court's judgment (R. 407a), the Urquharts appealed to the Court of Appeals for the Third Circuit. On May 18, 1949, after consideration of the briefs and arguments on appeal, that Court filed an opinion (R. 754-7), affirming the District Court's judgment. The Urquharts petitioned for rehearing, alleging that the Court's opinion of May 18, 1949 involved misunderstandings of the factual evidence (R. 769). The Court allowed the petition, and ordered an oral reargument of the entire case (R. 793-4), at which it also received a new brief from the Urquharts covering their views of the entire case, and a short reply brief from Pyrene.

On May 31, 1949, the Court of Appeals for the Third Circuit, after full consideration of the issues raised at the reargument, withdrew its opinion of May 18, 1949 (R. 794-5), and filed a longer opinion as to invalidity (R. 795-801) and a judgment (R. 802), which also affirmed the judgment below.

The Urquharts then filed a petition (R. 803) to the Court of Appeals to limit or clarify its decision of May 31, 1949 with respect to the misuse defense. On June 18, 1949, after

due consideration, the Appellate Court denied this petition (R. 806).

The present petition asks this Court to review the Court of Appeals' decision of May 31, 1949, rendered after argument and reargument of the case.

Comparing the Court of Appeals' decision (R. 795-801) with that of the District Court (R. 396a-407a), it will be seen that both Courts hold the claims in suit invalid for lack of invention on the same factual grounds, and that the decision on appeal does not express or imply disagreement with the District Court.

## ARGUMENT

### I. As to the petition to review the Court's holding of invalidity of the patent claims in suit:

The petition in substance requests the Court to review factual findings on which both Courts below concurred. There is involved no conflict between the Third Circuit Court's decision and that of any other Circuit Court of Appeals, and no important question of law, nor any of the other circumstances referred to in this Court's Rule 38, subdivision 5(a), (b) or (c), as usual grounds for granting petitions.

The petition (pp. 25-7), under the heading "Reasons for Allowance of the Writ" lists three points having to do with the holding of invalidity. We will now briefly comment on these points.

*As to Point 1:*

The petition quotes two sentences, isolated from the text, at pages 5 (R. 799, last sentence of middle paragraph) and 6 (R. 800, last sentence of first paragraph) of the Court of Appeals' opinion, reading respectively:

> "Improvement will not sustain invention and at most the insertion of a baffle or spiral in a nozzle can

> constitute nothing more than mechanical ingenuity" and "But we state again that improvement of a disclosed process cannot constitute invention".

The petition and brief attempt to twist the Court's meaning into a holding of law that an improvement can *never* amount to invention. It is obvious from the opinion that the Court made no such holding of law.

The text of the opinion from which the sentences are excerpted makes it plain that what the Court meant by each of these sentences was that such improvement, if any, in foam or throw, as Urquharts may have made over the prior Wagner process by putting a spiral or baffle in the motive nozzle of the jet pump to increase turbulence and subdivision of the liquid, was at most a matter of mechanical ingenuity within ordinary engineering skill, and that such improvement does not amount to invention. The fact that improvement in the nature of mechanical ingenuity or otherwise within the skill of the art does not amount to invention is, of course, elementary patent law.

Plainly there is no merit in Petitioners' Point 1, that the Third Circuit Court of Appeals made a holding of law that improvement can never amount to invention.

*As to Point 2:*

Here the petition attempts to create an illusion of conflict between the decision of the Court of Appeals in this case and an unreported and unappealed decision (R. 497a-500a) of the United States District Court for the District of Columbia. There is no such conflict.

Patent 2,106,043 in suit was not involved in the District of Columbia case. It issued on a divisional application, two years before the Columbia case was decided.

The District of Columbia case was an *ex parte* suit brought by the Urquharts under R. S. Section 4915 (35 U. S. C. A. Section 63) to obtain allowance of claim 28 of their application (now claim 1 of Patent 2,198,585), the only claim involved in that case. This claim is identical

with claim 12 of Patent 2,106,043,—except that it substitutes the phrase "aspirating air from the atmosphere" for the phrase "entraining gas" used in claim 12.

The issue in the District of Columbia case was whether or not the drawings and description of the Urquharts' original application disclosed a process that involved "aspirating air from the atmosphere". The Patent Office had allowed all the other claims of both patents, but had rejected claim 28 because it considered that the Urquhart description was confined to a process in which the gas inlet pipe (see pipe 14 of Figure 1) was connected to some source of gas or air under a pressure above atmospheric pressure, and did not disclose a process leaving the inlet open for "aspirating air from the atmosphere". (See the file history Physical Exhibit P-3-B.) In so deciding the Patent Office stressed the sentences of the patent description (p. 1, lines 42-50), as follows:

> "The entering gas is distributed in the chamber 11 under pressure which may be from 15 to 30 pounds per square inch, or any desired pressure, depending upon the throw which is desired from the foam nozzle. It is possible to introduce the gas at relatively low pressures (not lower than the nozzle outlet pressure) but better results are obtained by forcing the gas in at higher pressures."

According to the Patent Office view, these sentences recommend that the air or gas be delivered to the inlet at a pressure of 15 to 30 pounds per square inch above atmospheric pressure, and in any event at a pressure "not lower than the nozzle outlet pressure", which the Patent Office held to be above atmospheric pressure.

In the District of Columbia case the Urquharts persuaded that Court that their description included leaving the gas inlet open to the atmosphere; that the 15 to 30 pounds pressure recommended was on "the absolute scale", and meant atmospheric pressure to about 15 pounds above it; and that "nozzle outlet pressure" meant merely whatever the pressure of the surrounding atmosphere might be.

These were the issues decided by the District of Columbia Court (R. 497a-500a).

No such issues were involved in the present suit, where the Courts assumed that the District of Columbia Court was right in deciding that the patents describe a process involving "aspirating air from the atmosphere", but held the process claims of both patents in suit invalid on other grounds.

The brief in support of the present petition mistakenly assumes that the District of Columbia Court decided something about the action of the spiral in the motive nozzle of the jet pump and its effect on turbulence and subdivision, which conflicts with the Court of Appeals' views in the present case. But no such subject matter was involved in the District of Columbia case. Claim 1 of Patent 2,198,585 there in issue was identical with allowed claim 12 of Patent 2,106,043 insofar as it refers to turbulence and subdivision, and there was no issue with the Patent Office about that part of the claim in the District of Columbia case.

Plainly there is no conflict, and no merit in Point 2.

*As to Point 3:*

Here the Petitioners ask this Court to review the concurrent findings of the Court of Appeals and District Court to the effect that the process claims in suit lack invention over the prior Wagner patents, and that the apparatus claims lack invention over the prior Wagner and Burmeister patents; and also the Court of Appeals' further finding that the apparatus claims are also void for functionality; and the District Court's further findings that the apparatus claims are void for aggregation and not infringed. The petition alleges that the findings depart from the evidence so far as to call for exercise of this Court's power of supervision.

The findings are fully supported by the evidence, and Petitioners have had full opportunity to present their contrary views not only to the District Court, which saw and

heard the witnesses, but also to the Court of Appeals both on argument and on reargument.

(1) *As to the process claims:*

Both Courts found (Court of Appeals R. 796-799; District Court R. 397a-8a) that the idea of making mechanical fire extinguishing foam substantially as described and claimed in the patents in suit did not originate with Petitioners, but was disclosed in each of the prior Wagner patents (British, issued in 1927, R. 630a; U. S., issued in 1931, R. 628a; and German, issued in 1931, R. 633a). They found that Wagner, like the Urquharts, described a process of making fire extinguishing foam by forcing a stream of water containing a foam stabilizer (such as saponin) through a water jet air pump, to suck in and intimately mix with the liquid enough air to form and discharge a stream of foam at a fire. This finding is fully supported by the text of the Wagner patents, and the testimony about their disclosures (R. 255a-262a).

Petitioners did not deny the priority of Wagner's patents, but contended that the Wagner disclosures were inoperative because Wagner did not describe the inside of the motive nozzle of his water jet air pump, or state specifically that a motive nozzle should be used which subdivides the jet of liquid forced through it. Petitioners attacked Wagner's motive nozzle disclosure, because that was the only respect in which the Urquhart patents gave any more information than Wagner about how to engineer a jet pump for the job. They contended (R. 55a) that the Urquhart patents (R. 414a, 419a) described a patentable improvement over Wagner which made the process operative, by suggesting (Urquhart patents p. 1, column 2, lines 20-26 and 37-42) that it is "desirable" to have in the motive nozzle 12 of their water jet air pump "a spiral 13 or other suitable baffle means which will cause turbulent flow of the mixture and insure good contact with the gas"; that the action taking place in the motive nozzle 12 "may be described as mechanical subdivision of the foam forming

mixture"; and that "this action is not absolutely necessary for the present invention but is advantageous." Petitioners argued that their alleged invention over Wagner was embodied in process claims 12 and 1 in suit by specifying that the jet of liquid was discharged from the nozzle "in such manner as to impart a high degree of turbulence to the body of the stream, thereby finely subdividing the same."

Both Courts found that Wagner's disclosure was operative, and that any improvement resulting from the Urquharts' suggestion of putting a "spiral or other suitable baffle means in the motive nozzle" "to impart a high degree of turbulence to the body of the stream, thereby finely subdividing the same" was a matter of ordinary unpatentable engineering skill (Court of Appeals, 769-800; District Court, 398a-402a). These findings are fully supported by the evidence.

The text of the Wagner patents makes it clear that the duty for which his jet pump should be engineered is to aspirate and intimately and mechanically mix with the motive liquid the air needed to fill the foam and to discharge the product at a velocity sufficient to carry it to the fire. (See Wagner British, R. 630a, lines 15-20 and 55-65; Wagner U. S., R. 628a, lines 3-14, 17-19; Wagner German, R. 633a-635a). And Wagner pointed out that jet air pumps suitable for the duties he prescribed were "well known" (Wagner British, R. 630a, lines 54-55; German R. 634a, lines 13-14).

The evidence in this case shows conclusively that such jet pumps and how to engineer them to perform the duties Wagner prescribed had in fact been well known for at least 40 years prior to the date of the Wagner patents.

The testimony of Lindemann, chief engineer of Schutte and Koerting, the largest jet pump manufacturer (R. 231a-254a and 690a-711a) describes how water jet pumps had always been engineered for pumping air. One requirement was that the motive nozzle should subdivide the jet enough so that, in passing across the air suction space of the jet pump, it would contact and drive into the discharge pipe

of the jet pump the desired proportion of air. A second requirement was that the discharge pipe must be positioned and proportioned with respect to the jet so that an intimate mixture of air and water would just fill the discharge pipe to prevent the air from leaking back into the suction space. A third requirement was that the mixture of air and water must be discharged at sufficient velocity to prevent the air from leaking back into the suction space. With these requirements in mind, Schutte and Koerting made and sold a large variety of water jet air and gas pumps and engineered them to suit any job for which a customer wanted one. Schutte and Koerting also made and sold a large variety of jet pumps engineered for pumping liquids or solids. These pumps did not have to meet the above mentioned air pump requirements, and like any other kind of pumps designed for pumping liquids or solids were usually ineffective for pumping air.

With regard to the Urquharts' alleged improvement of putting a spiral or other baffle means in the motive nozzle to cause turbulence of the liquid and thereby subdivide the same, Petitioners admitted at the trial (R. 263a-4a) that it was a very old expedient known to increase the efficiency of water jet air pumps for aspirating and intimately mixing air with the motive liquid. It is described for example in the Koerting patent of 1883 (R. 639a, p. 62, lines 51-66 and 89-99); Koerting patent of 1909 (R. 643a); Symons patent of 1912 (R. 646a); and Schutte and Koerting catalogue (R. 653a). Lindemann testified (R. 241a-2a, 710a) that Schutte and Koerting always used a spiral in the motive nozzle of all kinds of water jet air pumps which they made and sold (except small laboratory jet air pumps for which efficiency was not important, and jet air pumps designed to operate at water pressures too low to work well with a spiral).

The testimony of McNulty (R. 264a-279a) shows that it is not necessary to use a spiral or other special jet subdividing means in order to make fire extinguishing foam by the Wagner process. It shows that with or without a

spiral the pump must be properly engineered in the usual way to pump air vigorously by proportioning and positioning the discharge pipe suitably with respect to the jet; but that any ordinary sort of hole through the motive nozzle, straight or tapered, will spray out the jet enough to aspirate and intimately mix the proportion of air needed to make a fire extinguishing foam by the Wagner process.

Petitioners also argued that they must have made some invention over Wagner because the Wagner process was not immediately put into commercial use. Both Courts found no merit in this argument. They found that the need for a cheaper stabilizer was responsible for this delay, and the District Court also referred to the difficulty of convincing the public that an air filled foam would be competitively as good as non-combustible gas filled chemical foam for putting out a fire (Court of Appeals, R. 800; District Court, R. 403a). The evidence fully supports these findings.

Urquhart admitted that these were the reasons why Petitioners did not succeed in interesting anyone in using their process commercially until about 1938. As to the need for a cheaper stabilizer, he testified (R. 54a) that the cost of making air foam by the Urquhart process with saponin stabilizer was about the same as the cost of making chemical foam by the old chemical foam process then in general use; and that the very high cost of saponin mitigated against the use of their process (R. 53a-4a); and that after trying unsuccessfully in 1932 by numerous demonstrations and tests (R. 52a-4a) to interest the Mack Truck Company and the Standard Oil Company in commercializing the Urquhart process, the Urquharts worked for several years on developing a cheaper stabilizer than saponin, before again attempting to interest anyone in the commercialization of their process.

Urquhart's testimony also shows the difficulty of persuading the public before the advent of cheaper stabilizers that air foam made by the Wagner and Urquhart process would be competitively as good as the non-combustible gas filled foam made by the old chemical foam process then in

general use. The Standard Oil Company and the Mack Truck Company, to whom the Urquharts demonstrated their process in 1932-1934, were not interested in its possibilities for making air foam, but only in its possibilities for making a non-combustible gas filled foam mechanically as shown in Figures 3 and 4 of the patents in suit (R. 52a-3a). Also the Urquhart patents in suit state (R. 414a, 419a, p. 1, column 2, lines 34-5): "It is obviously better, however, to use a non-combustible gas". But, for making non-combustible gas filled foam, the Urquhart process proved to be commercially impractical, and still is up to the present time (R. 136a-7a). Whenever non-combustible gas filled foam is wanted, the old chemical foam process was and still is better for making it.

In view of this strong public preference for non-combustible gas filled foam, it was impractical to commercialize the Urquhart or Wagner process for making air foam, so long as non-combustible gas filled chemical foam could be made as cheaply by the old process. Hence the necessity of finding cheaper stabilizers before the air foam process could be commercialized.

Durfee testified (R. 103a-4a) that these were also the reasons why Pyrene was not interested in trying to commercialize the Wagner process until it had found cheaper air foam stabilizers. In 1934 Pyrene heard that cheaper stabilizers had been developed abroad. In 1935 Pyrene developed its own air foam equipment and cheaper stabilizers and put them on the market in this country in 1936 (R. 104a-109a).

The Urquharts also argued that air foam is so superior to chemical foam for use on ships that the U. S. Navy would have used air foam before a cheaper stabilizer became available. But the record shows that although Pyrene in 1936 to 1940 sold air foam to the U. S. Army Air Forces (R. 475a), and to the British Navy (R. 134a), the U. S. Navy would have none of it, and used chemical foam exclusively until 1941, when it substantially copied the air foam devices and stabilizers which Pyrene had previously

supplied to the British Navy (R. 134a). Until cheaper air foam stabilizers came along, no customer wanted air foam.

(2) *As to the apparatus claims:*

Petitioners' patents contain no apparatus claims for their water jet air pump, because that was old apparatus. Instead, the apparatus claims seek to cover as a patentable combination a jet pump, engineered for drawing in and mixing a stabilizer with the water stream, connected in series to a water jet air pump for making mechanical foam. Both Courts found (Court of Appeals R. 800-801, District Court R. 404a) that in view of the Wagner patents the apparatus claims lacked invention over the Burmeister British patent 251,950 issued in 1927 (R. 662a), and this finding is fully supported by the evidence.

The Burmeister patent describes the same jet pump equipment as the Urquhart patents for making a premix of the water and stabilizer (R. 663a, lines 100-109), and shows it connected in series to a second jet pump for drawing in gas producing chemicals to convert the premix of water and stabilizer into chemical foam. The Urquhart apparatus claims attempt to monopolize this old Burmeister premixing equipment, whenever it is connected in series to a water jet air pump for making mechanical foam. Urquhart admitted that there was no sort of functional cooperation in their series arrangement of the two jet pumps. He testified (R. 58a-59a) that the water jet air pump functions in exactly the same way, regardless of how the premix of water and stabilizer is supplied to it. And the Burmeister water and stabilizer premixing equipment also functions in the same way to supply the water and stabilizer premix, regardless of what it is connected to. Plainly, as the Courts found, no invention is involved in connecting Burmeister's old water and stabilizer mixing equipment in series with another foam making device for which a supply of water containing stabilizer is wanted.

The District Court also condemned the Urquhart apparatus claims as an unpatentable aggregation, pointing out

that it would be as reasonable to claim a patentable combination with the hydrant which supplied the water (R. 404a).

The Court of Appeals further condemned the claims as too vague and functional on the face of the patent. The Urquhart patents only disclosed for supplying the water and stabilizer mixture a mechanical pump (illustrated diagrammatically by a square and nowhere described) and the old Burmeister jet pump arrangement. The apparatus claims do not attempt to cover the mechanical pump illustrated by the square, but instead of being limited to their jet pump arrangement—the only other thing described—they are vaguely and functionally worded in an attempt to cover any kind of apparatus whereby the energy of the water stream is used to draw in a stabilizer; and were asserted by the Urquharts to cover Pyrene's differential pressure devices which are totally different from jet pumps and which the Urquhart patents do not describe. The Court of Appeals was right in this holding also.

## II. As to the Petition to review the misuse defense:

1. Points 4 and 5 of the petition and supporting brief (petition p. 27, supporting brief pp. 41, 42) allege that the Urquharts and certain concerns not parties to this suit are embarrassed by the District Court's opinion sustaining this defense, because they are interested in the licensing system or in allegedly similar licensing systems under chemical foam patents. Therefore Petitioners argue that this Court should review the facts and applicable law in this case, and give or order the Court of Appeals to give an advisory opinion as to the licensing system for the benefit of the Urquharts and the persons not parties to this suit.

The Urquharts' licensing system comprises an agreement (R. 715a-9a) with National Foam Systems, a manufacturer of apparatus and stabilizers which it sells for use by the purchaser in the process claimed in the patents in suit.

The agreement defines "Foam Producers" and "Foam Stabilizers" as any apparatus or substances for use in the patented process. It requires the manufacturer to pay a royalty of 15% of the selling price to the Urquharts on all such supplies sold for use in the patented process, and licenses the purchasers to use in the process of the patents in suit the purchased "Foam Producers"—but only with purchased "Foam Stabilizers" on which the royalty has also been paid by the same or a similarly licensed manufacturer. The manufacturer marked all cans of "Foam Stabilizer" sold with a notice (R. 720a) warning the purchaser of the patents in suit and of these limitations upon the purchaser's right to practice the process claimed in the patents. A similar notice (R. 721a-2a) also accompanied any "Foam Producers" sold by the manufacturer.

The Urquharts testified (R. 731a-3a) that they had granted like licenses to two other manufacturers of such supplies, and were willing to license any other responsible manufacturers of such supplies on the same terms. The Urquharts also testified (R. 735a-6a) that they had not licensed any users of the patented process to practice it on terms permitting the user to buy his apparatus or stabilizer from sources other than the manufacturers who had the aforesaid agreements with the Urquharts; and that if any user applied for such a license they would demand a higher license fee than the aforesaid agreements required the manufacturers to pay (R. 736a, 737a, 740a, 753a).

The District Court's findings (R. 404a-7a) are fully supported by the foregoing evidence. The law it applied and which is applicable to such facts has been well settled by this Court, for example in *Leitch Mfg. Co.* v. *Barber Co.*, 302 U. S. 458; *B. B. Chemical Co.* v. *Ellis*, 314 U. S. 495; *Morton Salt Co.* v. *Suppiger Co.*, 314 U. S. 488; *Mercoid Corp.* v. *Mid-Continent Co.*, 320 U. S. 661; and *Mercoid Corp.* v. *Honeywell Co.*, 320 U. S. 680, 684. It has also been applied by the Court of Appeals for the Third Circuit in *Barber Asphalt Corp.* v. *La Fera Grecco Contr. Co.*, 116 F. 2d 211, and *National Lockwasher Co.* v. *George K. Garrett*

*Co.*, 137 F. 2d 255; and by the Court of Appeals for the Second Circuit in *Philad Co.* v. *Lechler Laboratories*, 107 F. 2d 747. No new question of law is involved.

Point 6 of the petition alleges that this Court's decisions in the freight basing point cases cited in Point 6 justify Petitioners' aforesaid use of its patents to maintain a partial monopoly in the sale of unpatented supplies for use in the patented process. These decisions obviously have no application to the facts of the patent misuse defense.

## Conclusion

The petition is without merit.

Respectfully submitted,

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